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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY:

EDITED BY

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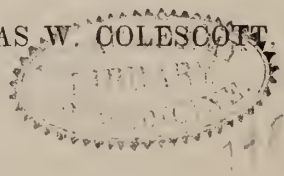

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MEDICINE AND SURGERY.

JANUARY, 1842.

ART. I.—*A Report of cases treated at the Louisville Marine Hospital.* By RICHARD W. FERGUSON, M. D.

In compliance with the requisitions of the Louisville District Medical Association, the committee on Autopsies beg leave to submit the following cases (all of which have occurred in public practice) as their report.

Upon the assumption of the duties of one of your committee at the Louisville Marine Hospital, commencing the fourth day of July, the following brief history of the patient, who is the subject of the first report, was given by the student in attendance, who had been particular in gaining information of his friends, at the time of his admission.

Case I.

Henry Schneider, a native of Germany, by trade a tailor, and a man of temperate habits, was admitted on the 23d of June, 1841. His health, previous to this attack, had been generally good; but on the 15th of the month, eight days prior to his admission, he was attacked with pain in the limbs, back and head, with inability to protrude the tongue. These symptoms were soon followed by vomiting of bilious matter, loss of appetite, and high febrile excitement. He had been under the medical treatment of a German doctor, in the city, without any benefit or amelioration of symptoms. At the period of admission to the hospital he did not complain of much pain, and this was confined to the region of the liver. Pressure with the hand did not cause pain in any other part of the abdomen. His tongue was coated with a thick brown fur, edge and tip red, and perfectly dry. Some difficulty still existed in the protrusion of that organ, and its retraction seemed difficult and slow. Pulse 125 in the minute, full and resisting; skin hot and dry, thirst great.

Treatment—About twelve ounces of blood was taken from the arm, after which calomel, gr. xx., and ipecacuanha, gr. j. combined, were given every two hours: the spt. mindereri and sponging the surface of the body with tepid vinegar and water were used in conjunction, in order to moderate his fever. Under this treatment he seemed to mend. The evacuations, which were dark, offensive and thin, at first, in a few days assumed a more natural appearance.

The above mentioned treatment was pursued till within three days of the time he fell into my hands; when it was thought by his attendants that the specific action of the mercury had been obtained, and it was accordingly abandoned, substituting for it rhubarb and magnesia, which he was taking at the time he was transferred.

After carefully inspecting the condition of his mouth, a different belief was entertained, and a cautious exhibition of the mercury and ipecac was resumed. His tongue, at this time, (4th of July,) was red, dry in the centre, edge pasty, and still

exhibited the brown coat; pulse, 100 in the minute; was free from pain and uneasiness in every part of the body; his mind was clear; skin dry.

A large crop of small white vesicles was discovered to occupy, without tenderness, his breast and abdominal parietes. The dose of calomel, commenced with, was ten grains with two of ipecacuanha, to be given every four hours with alternate doses of rhubarb, aloes, and jalap. The spt. mindereri was employed in conjunction with the above named purgatives, during the continuance of fever, and until free bilious discharges could be obtained.

July 5th. Patient has had several dark green evacuations, possessing a cabbage smell; his general condition about the same. Treatment continued.

6th. Patient rested well last night; complains of thirst; can cause pain by pressure upon the liver, far round toward the vertebral column; tongue unchanged; pulse 100 and soft; has had four dejections from the bowels, presenting the same colour and smell, and about the consistence of thick gruel; temperature of the body irregular. Prescription: Calomel, ℈j., camphor gr. ij., ipecac gr. ij. conjoined with spir. mindereri as before. Farinaceous articles of food, and animal broths allowed.

7th. Patient has rested well; is free now from pain; tongue somewhat improved; pulse 104 and more open and strong; skin soft and silky. He complains of loss of appetite, and of occasional thirst. He has had five or six discharges of blood from the bowels, which, in the aggregate, was estimated at half a gallon. This blood seemed to be about the consistence of thick gruel, dark and grainy, with some few coagula intermixed. Prescription: calomel ℈ij. every six hours.

8th. Rested well; no pain; feet and hands, this morning, rather cool; those white vesicles, already noticed, still continue on the body; thirst is moderate; tongue softer and cleaner; had five operations from the bowels in 24 hours; hemorrhage checked; is now passing off dark green cabbage-scented evacuations. Treatment pursued.

9th. Has had another good night; has no pain at any point; condition of his tongue unaltered, with the exception that its edge seems thickened, but no mercurial effects exhibit themselves; vesicles are disappearing from the upper part of the body, but are full and abundant about the groins and upper half of the thighs, intermixed upon the abdomen with small red splotches; his feet are cool; pulse 112 and moderately strong. Treatment continued.

10th. Patient did not rest well last night; is somewhat delerious this morning; tongue has become dry and adhesive; skin, nevertheless, is soft; pulse 106, and not so open and free as yesterday. Vesicles and petechiæ still conspicuous; has had four or five evacuations with a strong tendency to hemorrhage again. Prescription: Calomel ℥j. every five hours, until the above tendency subsides; beef tea ordered for nourishment.

11th. Tongue is less red but still dry; has thirst; pulse 104; skin very good; has had several dark green passages, with a slight admixture of blood and very offensive. Prescription: a dose of rhubarb and magnesia, ordered to-day to carry off the numerous and large doses of calomel he had been taking.

12th. Not so well; is weaker; breathing laborious; skin moist and clammy; tongue same; has had three operations, the consistence of thick gruel, with a slight tinge of blood, possessing, as before, the smell of cabbage; pulse 112, small and quick. Treatment continued.

13th. Patient decidedly worse; tongue soft on its edge, centre brown and rather dry; pulse 112; complains of being weak; sleeps with his eyes half open, the balls inverted; lies drawn up in bed, as one having a chill. Prescription: rest and nourishment. He died between the hours of 12 and 1 o'clock in the night.

Post-mortem held fifteen hours after death. Emaciation moderate; incurvation and rigidity of the fingers of both hands considerable.

The brain was given to Dr. Symmes, the Phrenologist, to exhibit and demonstrate to his class. The doctor stated, that

it was not until he was preparing the brain for the usual hardening process, that he discovered considerable softening of the organ, and this was unusual at two points—making up the phrenological compartments of hope, and—

The whole substance of the brain had been so far altered from its normal state, as to render him apprehensive that entire satisfaction in witnessing its fibrous structure (which the doctor was anxious to unfold) could not, upon that occcasion, be given. Even in this softened state, the demonstation was sufficiently clear to show its fibrous structure; it being much more conspicuous, however, in some portions than in others. The ventricles of course were not examined.

It may be proper, just here, to remark, that the doctor found out the boarding house of this man, and was duly informed by persons who knew him, who stated that his habits and character were in strict conformity with the diseased appearances as revealed in the cerebral mass.

Lungs.—Old adhesions about the root of the right lung, which organ was otherwise healthy.

Heart—Rather smaller than natural, walls thin and flaccid.

Spleen—Small but healthy.

Liver—Of the natural size, but pale and remarkably indurated; about the centre of the organ, an irregular yellowish discoloration, about four inches in diameter, gradually fading into the surrounding paler structure. Upon cutting into the organ it presented somewhat a carnified appearance.

Gall Bladder—Distended with dark green thin bile.

The stomach and the whole of the intestinal tube healthy, until we came to the ilium when it was discovered that very considerable ulceration had taken place; the blood vessels going to these ulcers were very much engorged, but there was no appearance of blood upon their surfaces. The ulcers increased in size, depth, and frequency down to the commencement of the colon, and in the caput coli there were two small ulcers.

Kidnies—healthy in their structure. The right had a vesi-

cle upon its outer surface, which might embed the half of a common size marble, filled with serum.

The mesenteric glands were found considerably enlarged.

Pancreas, healthy.

Case II.

Domineck Foissel, a native of France, a man who had been once intemperate in his habits, was seized with diabetes, upwards of three years ago, and was admitted into the Louisville Marine Hospital on the 21st of June, 1841. The disease, he said, came on gradually, but could not trace or refer it to any particular cause. His health, previous to this, had been always good, excepting once, when he had asthma, of which he had been cured. The diuresis has increased upon him. At the time of his admission he passed, in the 24 hours, eighteen pints of very clear, pale urine; the discharges from the bowels were involuntary; tongue perfectly clean; skin moist; towards evening he had slight exacerbations of fever. The treatment which was adopted in the absence of the attending physician for two or three days, was one which had for its chief object, the restriction of the diuresis; he was accordingly put upon a combination of bark, uva ursi, and opium, which had a good effect, and was afterwards continued with the addition of the precipitated carbonate of iron, of which xxv. gr. were given three times a day. All farinaceous articles of food, all vegetables, excepting cabbage, were forbidden. In a few days the first prescription was discontinued, and quinine and opium were substituted. This forms a brief outline of the treatment up to the time he fell into my hands, upon the 4th of July. The following were the symptoms detailed by him to me, interrogatories being previously made.

Appetite has been always good, and his stomach easy after meals; thirst great, but less of this latterly; mouth dry when quiet, becomes moist when he talks; tongue smooth and clean; taste varies, being either salt, sweet or bitter, and never good; skin, when he was first taken, felt rough and dry,

is now soft and pleasant; emaciation, loss of strength and weariness considerable; aversion to exercise—this has to be forced on him; has always more or less pain, with sensation of weakness in the region of the kidnies. The state of his bowels for the first month was a constipated one, since then they have become much more relaxed; loss of virility; lower half of his body and feet cold; his legs œdematous, at one time even as high as the knees. The swelling is now confined to his ankles, and is very slight; acid eructations have come on lately, but are not troublesome; flatulency considerable; eyes always clear, vision much diminished, but has neither vertigo nor headache. Dyspnœa he had previous to this attack, at the time he was laboring under asthma, no difficulty in breathing since. His gums looked ulcerated, as persons having a scorbutic affection; mind disposed to be cross and irritable.

He was working on a farm when this disease came gradually upon him, accompanied with pain in the back. He does not believe that any other member of his family ever had the like disease.

July 4th. His bowels at this time were frequently operated on, and were small and discolored, probably by his ferruginous medicines. Treatment continued.

5th. Bowels less operated on; tongue as usual, perfectly smooth and clean; quantity of urine the same; his evacuations were similar to those already described.

6th. Quantity of urine the same; condition of the bowels unchanged: increase of opium to j¼ gr. at each dose, taken thrice daily.

7th. The state of the patient the same, prescription as heretofore.

8th. Not so stupid and dull this morning as he was yesterday; this state was possibly produced by the anodyne; has some pain in the back. Prescription: lactucarium gr j., Dover's powder gr. v. combined, and given three times a day.

9th. Feels pretty well this morning; diuresis reduced to 8½ pints; tongue unaltered. Prescription continued.

10th. Patient has had nine small discharges from his bow-

els since yesterday, without any straining; diuresis not quite 8 pints. Prescription continued.

12th. Diuresis 8½ pints; complains of alum whey producing flatulency; condition of his bowels unaltered; no pain whatever about the abdomen. Prescription: ol. anisi gtt. ½, two or three times a day until relieved of flatulency and to suspend the alum whey.

13th. Is relieved of flatulency; diuresis reduced to six pints. Prescription, rest.

14th. Has had nine small dark-looking discharges as usual, diuresis reduced to seven pints, this depends greatly upon the amount of water taken during the day; with a view of restricting him the more, his drinks are ordered to be tepid.

15th. Has been operated on ten times since yesterday's visit; the last evacuation looked more natural; has some uneasiness in his bowels; flow of urine reduced to 6¾ pints; has been using cabbage at dinner. Prescription: quinine gr. j., opium gr. j. combined, to be given three times a day and to withdraw his cabbage.

16th. Feels easier in his bowels; they are less operated on; passages still small and in colour like soft soap. Prescription: lactucarium and Dover's powder as given on the 8th instant.

17th. Patient does not feel so well; recurrence of purging; stools the same in character; tongue still clear; pulse, which has been generally natural, is now 96 in the minute, regular and quick; complains of pain in the region of the liver, with loss of appetite. Prescription: hydrarg, cum creta gr. v., opium gr. ½ combined to be given every four hours. Decoction of rad. columba or quassia, to be used as a tonic. Tinct. opium gtt. x. with camphor water alternately.

18th. Patient has had no discharge of urine since 12 o'clock, the night of the 16th inst. At that time he passed about ½ pint; is free from pain; did not perspire yesterday; this morning the skin acts; diarrhœa urgent all day yesterday, at intervals of fifteen or twenty minutes. The dejections looked like yeast suspended in a thin whey colored fluid; complains of anorexia; thirst quite moderate now; tongue unaltered;

pulse, in a recumbent posture 70, sitting up is 76 in the minute. Prescription: hydrarg. cum creta gr. v. g. opium gr. j., four times a day.

19th. Diuresis, two-thirds of a pint yesterday morning, (just two days.) He has had no pain, no distension about the hypogastric region. Discharges from the bowels copius, frequent and involuntary. There is more redness than usual at the tip of the tongue; urine has a natural smell and color. Prescription: rad. columba gr. v. g., opium gr. j. to be given; the mercurial preparation discontinued.

20th. Rested well; feels stronger and better this morning; discharge of urine in 24 hours not quite one pint; tongue clean, particularly its edge, which has likewise a smoother appearance than the centre; complains of some pain in the back; pulse 70; evacuations still involuntary, and runs from him continually in a small stream. Prescription: add kino or the catechu to the powder of yesterday, and apply a burgundy pitch plaster to the small of his back.

21st. Rested very well last night; feels better this morning. Prescription the same.

22d. Rested well; feels stronger and better; diuresis one pint and a half since yesterday at 10 o'clock; head swims when he sits up; appetite good; thirst moderate; is not so much purged. but when upon the vessel he remains there upwards of an hour; passages are a pale yellow color, and of the consistence of soft soap. Prescription: give one grain of quinine three times a day, alternating with powders composed of opium and uva ursi.

23d. Somnolency very great this morning; diuresis to two pints in 24 hours; has had two dejections of a pale yellow color, and about the consistence of soft soap. Prescription: omit the uva ursi.

24th. Tongue somewhat pasty, edge soft; pulse 58 in the minute; back is a little better; diuresis not quite a pint, but his bowels have been operated on largely since midnight; stools thin and whey-like. Prescription: calomel gr. ij. g., opium gr. j. mixed, and to be given every four hours.

25th. Bowels still very much relaxed; discharges are involuntary again, and are thin and watery, having very much the color and smell of sour whey. The meat he eats passes off unchanged. Prescription: calomel gr. ij. opium iss., every four hours; his nourishment to be formed of gruel made out of parched rice; sinapisms to lumbar region.

26th. Rested pretty well in the latter part of the night; has been less purged; some little œdema about the ankles, more or less of this has occasionally presented itself throughout the attack; discharge of urine twice, half a pint each time; his bowels have been moved five times since yesterday, about the consistence of thick gruel, color a pale yellowish green; pulse 56. He expressed a desire for a little mush with salt, which was allowed.

27th. Rested well last night, though his bowels were occasionally much operated on; stools thin, and indicated feeble powers of digestion; pulse 56. Prescription: rhubarb, opium, and kino 2 gr. each, with quinine gr. j. to be given alternately with the preceding, in intervals of four hours; sinapisms to the back.

28th. Bowels in the same state; voided a pint of clear whiskey-colored urine; ankles a little swelled.

Died between the hours of three and four, on the 29th of July without any person knowing it. The nurse had been in attendance upon him at three o'clock when he was troubled still with this looseness of the bowels, but did not complain of any thing beyond this.

Post-mortem examination instituted about ten hours after death, when the following appearances were revealed:

Emaciation.—Moderate; very remarkable flexibility of the superior extremities with the usual stiffness of the inferior. The left ankle somewhat œdematous; strabismus of left eye, considered however to be accidental, there was no unnatural state of the pupils. As it was thought by your committee that the whole force of diseased action had been concentrated upon the abdominal viscera, and that it was here that pathological inquiries might be extensively made;

the head and thorax were consequently omitted in the examination; nor was their belief unsupported by the morbid appearances upon opening this cavity, which were as follows:

Liver—Somewhat enlarged; its external and internal appearance pretty good, but it possessed an uncommon degree of firmness. The only part which could be at all broken into by a thrust or continued pressure with the finger, was the superior thick portion of the right lobe, the edge or margin of whichwas likewise somewhat thickened.

Gall bladder—Moderately filled with very thick black bile.

Spleen—Small but healthy.

Stomach—Its whole surface was thickly covered with mucus. The mucous membrane itself was found considerably thickened, and very firm, so much so as to enable you to tear it off in strips. There was no other alteration than general thickening of this membrane throughout the intestinal tube, until arriving at the colon. The surface of this bowel was copiously studded over with vesicular looking pimples, which, however, contained matter of more decided consistence than is to be found in vesicular bodies, for it seemed somewhat caseous. The cœcum, was found bound down by strong adhesions to the whole iliac fossa. Within the sigmoid flexure of the colon were presented one or more singular bodies bearing the appearance of warty excrescences of a dull mulberry hue. The largest of these was not unlike in form and size the kidney bean; rather thicker and rounder than this, and pendulous from the mucous coat. These strange vegetations were more abundant, or rather more matured in the rectum.

Here they were found in different stages of perfection, ranging from the hard granulation, to the more ensanguined or purplish bodies already mentioned. These, at length, became more and more elongated in figure, and looked like numerous teats, or rather a collection of fungi, measuring from a fourth to half an inch in length. Each mushroom growth had, for its cap, a suet-like deposition, which could be easily removed. There were likewise discovered one or more surfaces or annular marks, between the size of a large spangle

and a half dime, regarded by your committee as vestiges of the dugs or fungi already described, for they correspond to their bases and were possibly removed by absorption, leaving these smooth plates within the rings, whose slightly thickened edges formed the only landmarks of prior disease at these points. The whole alimentary canal was thickly coated with a secretion of mucus.

Kidneys—Broader, thicker, and more rounded in form; somewhat hard to the touch, and rather more of a pink color than in the sound state. Their pelves, likewise, partook slightly of this hue. The investing cellular membranes and fatty portions surrounding these, and also other organs seemed to have been changed into a gelatinous amber-colored substance, which was found to be of a lighter color about the omentum. There was no remarkable odor perceptible about the urinary organs.

Bladder—Very much distended with insipid urine, which possessed also a brandy colour; mucous membrane here, as well as elsewhere, much thickened.

Mesenteric glands—Enlarged.

A small quantity of the whey-like discharges from the bowels was tested both by the action of heat and by a solution of corrosive sublimate in distilled water. Heat did not coagulate it, the solution changed its color and condition instantly, rendering it pinkish and flocculent, was at first suspended and floated in the solution, but in a little time it subsided to the bottom of the phial. The like quantity of urine (his last discharge) was treated in a similar manner, without coagulating by heat, and yielded a pale yellow deposite. This urine was perfectly clear, very much in colour like whiskey, and pricked the tongue as if there was something alkaline in its combination.

Different specimens of urine with, and without the tests exhibited.

In closing this observation, it may be proper to remark that very little was done, after he became my patient with the view of effecting a cure. Such a termination, however desi-

rable, was considered, under existing circumstances, impossible. The long continuance of the disease, its formidable nature, the inefficiency of art to combat it upon any principles of cure that were adopted by my predecessors, and that have been suggested by the profession, were quite sufficient to convince me that very little benefit, either by medicines or regimen, even in the way of alleviation could be obtained in the case. How far the above supposition was correct, the history of the patient up to this period induced it, the lesions revealed after death confirmed it. Nor was there any thing discovered in this examination, whereupon to base any certain conclusions respecting the nature of the disease.

All that can be said is, that if the kidneys, the disordered functions of which, and the pain located in the lumbar regions, conferring the characteristic features of the disease persuade to the opinion that these organs were the primary seat of it; the disordered state of the bowels, even prior to his admission to the hospital, and its unceasing concomitancy after this, together with the sudden and easy metastasis from the urinary to these organs shows that the chylopoietic and assistant chylopoietic viscera generally were not now in a less deranged state.

Case III.

Jas. B. Read, æt 36, a native of New York, was put ashore at Portland, having arrived there in some steamboat, and was brought to the Louisville Marine Hospital on the 4th of August. He was totally insensible at the time of admission, from which state he could not, for an instant, be roused, nor could any very satisfactory account be given of him; reported, however, as having been troubled with diarrhœa.

His bowels were moved the day he became an inmate of the institution. The dejections, contrary to what was anticipated from the report given, were noticed to be neither thin nor frequent.

August 5th. Patient still insensible; lies mostly with his body bent; knees drawn upwards towards his breast; occa-

sional jactitation, and frequent low moaning, as one in extreme pain. Tongue, as seen through his open mouth, thickened, dry, and red with a brown coating in the centre; skin cool, and remarkably lifeless or inelastic; pulse very small and quick; tenderness and some fulness about the region of the liver.

Blisters and sinapisms had been applied previously to my seeing him. The latter were ordered to be re-applied to his arms, and the ammonia julap to be given every half hour or hour until reaction was established. This could not be effected and he died at 7 o'clock, P. M.—insensible to the last.

Post-mortem appearances twenty hours after death. Emaciation moderate; considerable incurvation and rigidity of fingers.

Brain—Serious effusion thrown out upon the arachnoid membrane, with a heavy coating of lymph deposited on the anterior lobes; at the disparting of the optic nerves, a small coagulum of blood, was found lying near the left nerve.

The ventricles were not examined in consequence of a disposition expressed upon the part of one of your committee to save it entire for the Medical Institute, as a fine specimen of arachnitis, which was most cordially allowed.

Liver—Somewhat enlarged; its general surface possessed a turmeric color with one or more lighter yellow spots about the centre of the right lobe, the left had its margin similarly discoloured, and extending nearly all around toward the great fissure, and another at this point. The superior margin of the right lobe differed again from any other portion; its color being a light pink; the whole organ possessed somewhat an unctuous feel, was regarded therefore by two of your committee, who made the examination, as coming under the appellation of "fatty degeneration of the liver."

Gall bladder—Distended with thick dark bile; cutting into it, thick particles flowed off not unlike softened tea leaves.

In the absence of morbid specimens, which were unfortunately lost, an attempt has been made by paintings to supply this want.

Louisville, November, 1841.

ART. II.—*A case of Labour attended by some unusual appearances.* By JOHN OVERTON, M. D., of Nashville, Tenn.

Mary, a coloured woman, was seized with labour-pains, and all the concomitant symptoms of child bearing on the —— day of —— 1822. The pains were importunate and severe, accompanied by much restlessness and sudden, often-repeated and rude tossing of the body in different directions. The woman was ungovernable by the midwife, who was in attendance, and in despite of every admonition to the contrary, continued to throw herself, with considerable violence, alternately on her back and abdomen upon which she ultimately fell upon a bench. At eleven o'clock at night, succeeding the time of its commencement, the labour subsided, immediately after much tossing and agitation of the body, the fall upon the bench, before noticed.

The child, which, anterior to this occurrence, descended perceptibility into the superior strait of the pelvis, now suddenly receded and was no longer perceptible to the touch, per vias naturales. The abdomen, which, before, was tense and apparently collected about the uterine region, was now relaxed; without any contraction of its muscular portions, and diffused equally over this region, to a much greater extent than is usual in parturient women: or even in the latter months of gestation. Until this period the labour had been marked by strong and frequently repeated bearing-down pains, together with every other exertion of muscularity usually and necessarily attendant on parturition. These, however, were suddenly subsided, and, in lieu thereof, the woman ceased to toss about, remained still, on her back, and complained of a heavy pain constantly present about the umbilicus, and expressed her sensations of bodily suffering by grunts, frequently repeated, and at regular intervals; but without referring their production to any cause, necessarily in connection with the parturient state. She felt pain about the umbilicus; was sick at the stomach, and occasionally vomited, and felt general dis-

quietude and uneasiness of body; but nothing like an effort of the womb and abdominal parietes, to finish a process which had been commenced with such pressing activity. The countenance was *wild* and affrighted, and seemed indicative of a mind despondent in its hopes, defeated in its anticipations, and bowed down under the weight of a calamity which no art could evade or strength overcome. The arterial system, however, did not participate in the state of the mind or body. The pulse was sufficiently full, somewhat accelerated beyond what is usual in parturient women, but was moderately soft, round, regular, open, and slow, as respects the quickening of its pulsations. Judging by the pulse alone, there appeared nothing in the case to excite alarm; or which demanded the intervention of art, in the consummation of the delivery. The os tincæ, and other structures mechanically operative or passive in the process of child-bearing, were in a state of entire relaxation and the fœtus having receded from the superior strait of the pelvis rested upon, and by a considerable part of its mass, hung over the pelvis upon the abdominal muscles. Such was the condition of this woman when I first visited her, which was twenty-six hours after the distinct existence of labour, and fifteen after the cessation of all the uterine exertions.

Reflecting upon the phenomena furnished by the case, I was enabled, in a short time, to settle in my own mind its pathological character, as well as the indications, which it was indispensable to accomplish, to obtain relief. I concluded that the abdominal muscles had *certainly*, and the womb *probably*, suffered a mechanical injury in consequence of the excessive tossing and tumbling, and fall of the woman in the first stage of the labour; and that the cessation of the parturient exertions, being the result of a cause so durable in its nature as a bruise or laceration, were not likely again to recur; in no event soon enough to satisfy the present necessities of the system. Under these presentations I determined to turn and deliver the fœtus by the feet, without further attendance upon the efforts of nature to furnish any assistance, which she had

already obstinately denied by fifteen hours of delay. The feet were consequently brought into the vagina, yet still indulging a feeble hope that nature *might* possibly resume her work, under circumstances promising a more speedy and felicitious result, they were permitted to remain in this situation for the space of two hours, awaiting the renewal of the actions of the uterus to complete the delivery. Uterine action, however, did not occur, and the child was delivered by the efforts of the accoucheur alone, without any perceptible effort of the womb, or abdominal muscles promotive of this result; which was produced, not without much more assiduity and circumspection than is necessary in the management of ordinary births when effected by turning. The expulsive efforts of the womb having entirely ceased, there existed no power independent of the accoucheur which was at all calculated to establish the necessary relationship between the head of the fœtus and the varying dimensions of the outlet through which it was to pass.

Correctly to effect a proper adaptation of the short diameter of the head to the largest diameter of the pelvis, as varied by different portions of its extent, retarded the delivery, and constituted, after the turning was accomplished, the chief difficulty with which the accoucheur had to combat.

The fœtus having been delivered, was separated from the placental attachment, and the woman put to bed; still hoping that the womb might, after so long a respite from exertion, resume its activity, and expel the placenta from its attachments. For this purpose the patient remained without any interference, save that of greatly agitating the abdominal parietes over the uterine region, for four hours without the least appearance of contraction in the womb, or abdominal muscles. The abdomen remained soft, and as large as before delivery; manifesting an entire insensibility to the impression of any irritation to which it was subjected.

At this time the occurrence of profuse hemorrhage induced me to deliver the placenta with as much expedition as practicable. It was found in situ naturale, and detached from the womb but by a small portion of its circumference; and was

removed by means as independent of uterine exertion, as those which before had relieved this viscus from the burden of the fœtus.

After the delivery of the placenta the hemorrhage soon ceased, and the lochial evacuation which succeeded was unattended with any character in respect either to extent or duration, which rendered it peculiar; and except the relaxed and protuberant state of the abdomen, and an inconsiderable sensation of pain attributed to the region of the umbilicus, all the phenomena now portended a favorable recovery. In this condition the patient was left, with general direction for her treatment during her confinement, and a request, that should any unusual symptom occur, to send me word of it.

After a few days I was requested to visit this woman again, and found her labouring under most of the symptoms which are usually the result of mechanical violence done to any important viscus; with the modifications of these symptoms, which is perhaps always attendant upon serious lesions of the womb. The prominent causes of complaint, were a hard and painful tumor, phlegmonous in its aspect, of a circular form, of about four or five inches in diameter, the umbilicus occupying about the centre of the diseased circle. The tumor was but slightly elevated above the healthy surface of the abdomen, but in all other respects very accurately resembled an ordinary phlegmon of the abdominal parietes.

Believing that these appearances were to be attributed to mechanical injury done to the womb and abdominal muscles at the time of delivery, I directed an abstemious diet, small portions of antimony as a febrifuge, and a linseed poultice applied warm and kept constantly over the whole surface of the tumor.

This treatment was continued with but little variation, until free suppuration had been established; which was indicative as in other phlegmonious tumors, by pointing towards its centre, and an evident fluctuation of its contents from percussion with the fingers. The tumor was now opened in the ordinary manner with a lancet, and discharged at the time

about half a pint of matter greatly resembling ordinary pus, though somewhat more thin and gluey in its appearance. From this time the tumor and all the symptomatic effects which had attended its progress gradually declined; and after the lapse of five or six weeks the discharge entirely ceased and the wound was entirely cicatrised.

I have seen this woman within a few weeks. She now enjoys fine health, has grown corpulent, but has never been pregnant sice the accident above described; although at the time of its occurrence she was not more than 18 years of age. Since the accident she has menstruated.

It may be proper to add, that, at the time of delivery, there was no evidence of any injury done to the abdominal parietes, competent to account for the sudden suspension of uterine action, which occurred during the progress of the labour. There was no wound or perceptible bruise of the abdomen, or complaint of pain from injury done to this surface. I came, therefore, to the conclusion, at the time, that the womb had beeen ruptured: although the abdominal covering had suffered little comparative injury. The probable condition of the different parts subjected to the action of the same lædent cause enables me to confide in the truth of this conclusion; the abdomen was comparatively relaxed, the womb in a state of strong contraction at the time of the fall and hence the dissimilarity of its effect upon the two parts submitted to its influence.

Nashville, Sept. 8, 1841

ART. III.—*Observations on the Topography, Climate, and Diseases of a District in the Eastern part of the State of Ohio.* By THOMAS CARROLL, M. D., late of St. Clairsville, now of Cincinnati, Ohio.

This district of country lies between 39° 25', and 40° 46' north lat. Its mean breadth is about fifty miles. It is the most elevated part of the State of Ohio; the highest points being not less than one hundred and twenty feet higher than those of any other section of the State. The dividing ridge running through this tract of country approaches much nearer the Ohio than it does the rivers on the west of it. Those streams falling into the Ohio have, of course, much more velocity than those that run into the Muskingum and Tuscarawas. Several of these tributaries have a retrograde direction, which renders their velocity still less; notwithstanding the slowness of their currents, they have cut deeply into the strata, leaving high elevations on either side. Their alluviums are often extensive and subject to inundation at various seasons; this liability is much increased in consequence of the elevation and great unevenness of the country. The alluviums along the Ohio and its tributaries are not very extensive and are but seldom inundated.

With the exception of a small tract, south of Sandy creek, every portion of this district is hilly. The altitude at which most of the population live above the level of the ocean is from eleven to twelve hundred feet; being about five hundred above the Ohio river, whilst some are six or seven, perhaps, even more. But a small proportion of the population reside on the alluviums. The elevation of the country renders it but little subject to fogs; they are, however, frequent along the rivers and larger streams, but do not often mount more than half way up the hills. Above the elevation to which they reach, the air is dry and pure; hurricanes are not frequent, and when they do exist, they are not so violent as in the lower and more level parts of the State. The thermometer seldom or never rises so high nor falls so low as it does farther west. The position of the district secures it from the

bleak winds that sweep over the lakes; and its elevation seems to guard it from those long continued droughts to which, I think, the less elevated and level parts of the west are subject; I, however, have but few data to rest this opinion on. Of the natives of this district it may be said (probably with truth) that they are the most beautiful of the natives northwest of the Ohio river. They are tall, muscular, well proportioned, and evince much intellectual power.

In common with Western Pennsylvania, and some other elevated sections of country the inhabitants of this district are subject to goitre. Its prevalence, however, is much less than it was thirty years ago; and when it does occur it does not often reach the same magnitude that it did formerly. As it has declined, pulmonary consumption has increased. This fatal affection was once of rare occurrence, but of late years many fall victims to it. The exchange of goitre for this disease is of course unfavourable to the interests of human life.

My friend, Professor Darby, of Canonsburgh, Pa., informs me that he had examined the burying grounds of different districts of country for the purpose of discovering at what periods of life the greatest amount of deaths had taken place, and he found that, in Western Pennsylvania, a larger proportion, from fifteen to twenty, had occurred than he had observed any where else. This mortality was, no doubt, brought about, in a great measure, by pulmonary affections; indeed it must be conceded that the inhabitants of countries located like those under consideration have always been subject to pulmonary affections.

Eastern Ohio, in common with the west, has undergone a change within the last forty years. When the forests were unbroken but little more than the gentle breeze was felt, but as the lands were cleared off more rapid currents of air became common. Greater vicissitudes of heat and cold took place, and they increase as improvement advances, which must, of course, have an influence on the human constitution. But the people have materially changed their mode of living, their manner of dress, and above all their education has un-

dergone an immense change. Formerly females received but a slight education. A few months, during a very few winters, was all the time the girl spent at school, and frequently this was only continued for a single winter; and not unfrequently indeed her education was altogether denied. This condition of things slowly gave way, and that chiefly among the wealthier classes, to what is called a refined education. A young lady is now instructed in the country schools to read and write, with a slight knowledge of arithmetic; she is then sent to a boarding school for the purpose of having her education finished. Here she is required to spend a very large amount of her time in study, and the little exercise she takes is under peculiar restraints, which detract much from its beneficial influence. Had the pupil to endure this mode of life for a few months only she would most likely escape the awful consequences which follow, but unfortunately this course is pursued for years; one of the evils most to be lamented is, that this boarding-school part of her education is commenced at a most unfortunate period, (about the age of twelve or fourteen) and is often continued for two, three, or four years, through a period of life in which, above all others the utmost attention should be paid to the health of females. This unfortunate period, chosen for the education of girls, and the still more unfortunate manner, pursued in disposing of their time, lays the foundation of most serious mischief to their constitutions, and seems to have a peculiar tendency to derange the healthy condition of the lungs. When a *poor girl* becomes diseased, during the time she is finishing her education from home, and when her parents and teachers feel ambitious that her mental improvement should continue, but little attention is paid to her health, either by herself or her teachers. Paleness, loss of flesh and debility, do not give alarm; but at length a cough supervenes, or spitting of blood; when, for the first time, the fears of her friends are awakened, and she is sent home to receive the last charities of life. It must, however, be admitted that many others fall victims to diseases of the lungs; this is peculiarly the case with those who have been

long confined to a sedentary life. Females, I think, often bring on pulmonary complaints, by long confinement to the house; and I am not certain but that the habit, which so much prevails of late years, of excluding solar light from our houses, has not had a tendency to increase these affections, and some other forms of disease.

The changes in the diseases of the male sex, in the region of which I speak, have probably not been so great as in those of the female, and are somewhat of a different kind. During the early settlement of the south-eastern part of Ohio, suffering and labor were endured which are now but seldom experienced. Forty years ago, few of the arts of civilized life were practised west of the Alleghany mountains. Every foreign fabric was dear, and rendered doubly so, in consequence of the scarcity of money; they were, therefore, nearly excluded from the country. Shoes were but seldom worn by males under the age of fifteen, except in winter, and often not by females; hence the liability to inflammatory disease at that time. Rheumatism was among the most prevalent of this class, indeed it was so common that the sufferer but seldom had much done for his relief, and was not unfrequently laughed at when he complained. As the improvements of the country advanced, more care was taken as to the clothing of children; houses became better, and labour less severe; of course this disease measurably subsided among the young, but many, even now, who have borne the burden of settling the country, when it was a wilderness, are severely afflicted with the disease in its chronic form. But few of the young men now lead a sedentary life, nor have they at any time, unless their residence was in towns, or they were designed for one of the learned professions; such have, sometimes, become victims of pulmonary disease, or have been subjected to dyspepsia, &c. In those who devote themselves to study, these diseases are almost incurable, disinclination to exercise, and an inclination to the use of tobacco, seeming to me to be among the first causes of them.

A diseased state of the ligaments and cartilages of the joints

is probably about as prevalent here as in other sections of the Union, out of large towns and cities, from which the female suffers about as much as the male. I am inclined to the opinion, that the osseous structure, particularly of the vertebra, has suffered to a greater extent among the people of eastern Ohio, during the past forty years than in other parts where less severe labour has heen endured, as I have known several instances of diseased spine which manifestly had their origin from severe lifting.

During the colder season of the year a singular species of inflammatory disease is occasionally met with, and sometimes frequently. It consists of an inflammatory affection of one side of the head, attended with fever; the blood, when drawn, exhibiting a cupped and buffy coat. The eye and ear of the side affected are most pained. There are throbbing and intolarence of light, accompanied with fulness or swelling of the side of the head. The pain is more intense during the after part of the day and fore part of the night; subsiding towards morning, and again increasing towards noon. Sometimes this disease, or one similar to it, is met with in nervous females during the spring and summer, and when it appears in them it seems to assume the character incident to a similar affection in districts, subject to bilious diseases and may sometimes be relieved by the same treatment, but the inflammatory kind must be managed in a different way. As the complaint will generally continue for at least ten days it will be necessary to take this into consideration when the treatment shall be commenced. The reason why this affection continues so long, is, that the fluids have to undergo, as in other inflammatory diseases, a radical change before health can be completely restored.

In the treatment bleeding should first be had recourse to; then purging, followed by antimonials, which should be given throughout the complaint, in doses so moderate that much sickness will not be produced, if any. If the pain in the eye or ear be very great, taking blood from the temporal artery will be of great service; cupping, after the system has lost

enough by general bleeding, will be found very serviceable. It should be recollected that this disease is attended with severe inflammatory symptoms, and that there is always danger of inflammation of the brain, or its membranes, unless an active treatment be adopted.

The remitting and intermitting fevers of this region were, during the early settlement of the country, regular summer and autumnal visiters of the valleys of the Ohio, Muskingum, Tuscarawas, and of those of most of their large tributaries. With the advance of improvement, the disposition to these fevers has lessened until it has almost disappeared along the Ohio and its small tributaries. This, however, is not the case on the alluviums of the other streams. It will probably be long before these latter localities can claim an exemption from them. The total disappearance of drift-wood from these waters, and the straightening and embanking of some of them, would, in all probability, render their margins healthy to a much greater extent, than they now are; as inundation would by these means be in a great measure prevented. Many years must, however, elapse before that attention will be paid to this matter which will insure a general exemption from these fevers.

The inhabitants of the high lands, are very seldom affected with these diseases, particularly with intermitting fever; unless they expose themselves to the miasma of low situations. The high grounds, however, lying to the northeast of extensive low lands sometimes subject their inhabitants to these fevers. I recollect a locality very near New Lisbon, in Columbiana county, where persons were attacked at the distance of a mile and a half from the origin of the malaria, notwithstanding that a dense forest intervened. The origin of the malaria was, however, to be found in the extensive flooding by a mill-dam of a wooded alluvium. Take the country for twenty miles west of the Ohio, and extending from the Pennsylvania line to Marietta, and, I apprehend, no district, between it and the Mississippi has so great an exemption from these fevers. Indeed, no country could be much better

calculated to restore to perfect health constitutions partially broken down by remitting and intermitting fevers.

Autumnal fevers, when they occur, have more of the continued than of the remitting type; and seem to run insensibly into the continued fevers which appear late in the fall, and during the winter. Of these fevers I shall speak by and by, but shall now proceed to make a few observations on dysentery, which occasionally visits this region during the summer and autumn; and is not unfrequently severe and fatal. Dysentery most usually makes its appearance during dry weather, when the smaller streams are nearly dried up. I have not been able to discover, that this disease is owing to improper indulgence in summer or autumnal fruits, or in any particular diet, though it is no doubt occasionally *excited* by improper food. I have, several times, known it to occur in neighborhoods where fruit was rare and where the inhabitants lived on simple food. I think it is more frequently rife when vegetation is rendered languid by long continued drought, or when it begins to decline during autumn. Dysentery seems here to be governed by laws very nearly connected with those that govern autumnal fevers; this is particularly the case with regard to its duration.

The dysentery of this section has more intensity of character than it has in miasmatic localities. The fever is more continuous and the pain more constant; hence there is more fatality in the same number of cases. In its acute form but few diseases proceed with more rapidity to a fatal termination, and very few cause so much suffering. The subacute form is more tolerable as the patient has occasional intermissions of pain. In a few of the worst cases of acute dysentery, which I have seen, the patient had no respite from pain till the approach of death. In confirmation of this, I shall give the following case:

Miss G., aged 23, was taken, in September, 1829, with dysentery. The pain was unremitting from the first, and the evacuations frequent and bloody, accompanied with tenesmus, and great tenderness of the abdomen. In conse-

quence of the condition of the abdominal viscera, the breathing was short and difficult; there was sweating of the face, with moisture of the surface generally, which was about the natural temperature. I saw this unfortunate patient on the third day of her illness, for the first time. She was bled and purged; calomel and opium were administered in large doses, accompanied with cupping and the warm bath, but all without effect. She died thirty-six hours after I first saw her. But little mitigation of the pain was produced by any medicine or prescription that was made.

Children more frequently die of this disease than adults, and observation has led me to conclude that females fall victims to it more frequently than males. But few adults, however, are lost when the treatment is early commenced and persued judiciously throughout. This is peculiarly the case in the treatment of the subacute form.

Humanity owes much to the science of medicine for the improved treatment of this disease, yet old methods of cure still have their place and that which is inert or absolutely injurious is sometimes prescribed with all the solemnity attendant on the exhibition of the most potent and appropriate medicines.

Among the prescriptions that are compartively inert, may be counted the various mucilaginous drinks, such as those from gum arabic, and slippery-elm bark. A common prescription in the country, even now, is mutton soup and other articles of a similar kind which are administered whenever the sufferer can receive them without vomiting; and those are given from the very onset of the disease. I think it must be admitted that physicians are too careless about matters of this kind, for they sometimes approve of small quantities and often suffer their patients to be fed to death without saying a word against it. Can they believe that murder, committed by stuffing the stomach when the colon is inflamed, is not a crime?

I would gladly pass over without reprobation another prescription, which physicians cling to with much greater

tenacity than their patients—I mean injections. I am not certain that *I* ought to judge of them, as I must confess that I long since became prejudiced against their use by their effects in my own case. I never look back to the period when I was tortured by them without having a worse feeling against them than any man ought to have against an enemy. Opiates given by the mouth seem to me always to have as soothing a tendency as when administered by injection; and then all the horrible irritation which follows injections is avoided.

From the description I have given of dysentery, as it occasionally has occurred in this part of the country, it will no doubt be admitted that, under similar circumstances, an active treatment should be adopted and persevered in for some days, particularly in the acute forms of the disease. The course which I usually adopted in severe cases was to bleed freely at the onset, then to give an emetic of tartarized antimony, or ipecacuanha and calomel. As soon as vomiting had ceased a cathartic was administered of calomel followed by sulphate of magnesia; or jalap in strong constitutions, was substituted for the salts. When the cathartic had operated about twice pretty freely, calomel and opium were given in the proportion of ten grains of the former and one of the latter, with half a grain of ipecacuanha. About double this amount was administered at once, and repeated every four, six, or eight hours, as necessity required, until the mouth became affected with the mercury, or other specific effects were produced. It was often necessary to watch, with care, the effects that this medicine produced; for salivation was not always produced even by the largest doses, as many patients were not susceptible of its salivating operation. Such patients were, however, susceptible, very frequently of the constitutional operation of mercury, which could be known by the general condition of the system. In subacute cases smaller quantities of both opium and calomel were found sufficient; for instance, five grains of calomel, with one of opium, and half a grain of ipecacuanha, was observed to be enough for patients whose

constitution, had been broken down by using mercury to excess. Sometimes the blue pill was substituted, in ten grain doses, with Dover's powder, or what was better, sulphate of morphia and ipecac., which were found to answer better with nervous subjects. During the time this treatment was used attention was also paid to the skin. The warm bath was used twice a day, or oftener when it was practicable, and was found of much service. When the bath could not be used fomentations were substituted and were found of much service, indeed they were applied whether general bathing could be employed or not. But few general bleedings can be useful in most cases of dysentery, and so soon as the lancet is laid aside, local bleeding, by cups, is important, and I often found this method of drawing blood of great use. If there was much blood discharged and great soreness of the abdomen, I mostly found cupping useful; where great debility is present it will be of much service to use dry cupping; about half a dozen cups, set over the abdomen, will invite considerable blood to the surface, and I have often found that much relief from soreness and pain was experienced by the patient. It will probably be unimportant for me to say anything about the treatment that was pursued with most advantage in the close of the disease, when mucus and blood were no longer discharged, and where a diarrhœa had set in. I may remark, however, that acetate of lead with cretaceous preparations and opiates were then most to be relied on.

In long continued cases I have often found blistering of service, and sometimes warm brandy and laudanum have a happy effect when used as a fomentation over the abdomen during the night.

The reader has above observed the recommendation of epsom salts as a cathartic in dysentery; this recommendation grows out of long experience in the use of this medicine. I thought, many years ago, that hydragogue cathartics had more influence, when judiciously combined with mercurials, in overcoming the morbid action of the bowels than any other

cathartics, and more extended experience still has confirmed me in my former opinion.

The continued fevers of this region are more to be feared than any others, unless it be the eruptive; and probably no change of living nor alteration of the face of the country will ever eradicate them. Their existence is not determined by the season of the year, however they mostly commence in the latter part of autumn, when their characteristics approach more to those of remitting fevers than they do at other seasons. When they commence in autum, they often continue into the winter, or even through that season; and when they begin in winter, they frequently run on till spring. I recollect that one of these fevers began in the fall or early part of winter and continued through the ensuing spring and summer. This was in the year 1814, before I studied medicine, so that I can say but little about the true nature of it. I believe, however, that it wore a different aspect, in some particulars, from the winter fevers that have since appeared.

These continued fevers seem to depend upon a different cause or causes, from those which give origin to remitting and intermitting fevers; the former are found mostly on the high lands, and more often on those that are sterile than the rich; whilst the latter infest the alluvial districts, or marshy plains. In the common acceptation of the word, most of this district is infertile; the lands having a clay substratum often combined with a smaller or greater proportion of iron, but with little or no lime in their composition. Portions of the country, it is true, are rich, but they are not often of great extent; yet, probably one third of the *whole* may be considered good and some of it very productive. Lands of the latter description are clothed, when uncultivated, with native forests of great luxuriance and beauty, composed of walnut, sugar maple, buckeye, and other trees which delight in a fertile soil. These rich soils have mostly a considerable quantity of lime in their composition. The springs here have more lime in their waters than exists in those of the poorer sections; and they are generally more abundant.

As a medical man I observed the continued fever, for the first time, in November, 1823. It then existed near New Lisbon, and on the high and poor lands south of that town. In this locality it was peculiarly mortal. I again witnessed it at St. Clairsville, Belmont county, and the immediate neighborhood, late in the autumn of 1826. Here the land is of the finest quality, and the water limestone. I attended more than fifty cases within a very small space. It has, within the last sixteen years, frequently appeared in different portions of the southern and western parts of Belmont county, and also in Jefferson, Harrison, and other contiguous counties, no doubt oftener during winter than in any other season.

This fever often begins in a single individual of a family, and no other instance will be met with for a week or two, when one or more of the same family will be taken ill, and after some days, one or more of those who visit and attend on the sick, will, in their turn, sicken, and their friends, after attending them for some days, will also be taken down. In this way this fever seems to propagate itself. No people, probably, pay more attention to the sick than the members of the *Society* of *Friends*, and among them I have noticed the winter fevers to be peculiarly frequent; and have observed it extended to a great number. These facts have had a strong tendency to make me believe that this fever could be communicated from one individual to another. Further observation will, no doubt, decide this matter. The temperate, as well as the intemperate, are subject to its ravages. Circumstances in the mode of living seem to make but little difference, and children, as well as adults are obnoxious to it.

When an individual is about being taken with this fever he appears languid, has a bad appetite, and complains sometimes of a headache, and again of pain in the back; inclines to sleep, though his slumbers are disturbed, and he rises from them without feeling refreshed. After some days spent in this way, he gets out of bed but seldom, eats little or none, and his mind sometimes wanders when he is aroused. In a day or two more he lies all the time unless his brain be seriously affected, when

he is often much inclined to sit up, even when very ill. If his skin be examined during this time it will be found dry and inactive, and when pinched into folds it regains its smoothness very slowly, showing the loss of its elasticity. There is commonly but little flushing of the face at the commencement of the disease, but, as the fever advances, this symptom becomes more developed, especially in the after part of the day, and in some cases is eventually relieved by sweating. If the brain be diseased early, he will often show slight delirium, and will mostly complain of disagreeable feelings when he shakes his head, which he will not do without being urged; the eyes frequently become more brilliant than usual, and there is sometimes morbid acuteness of vision, with suffusion of the conjunctiva. Headache is not always present when the brain or its membranes are affected, and it is often present when the result shows that these parts were very little, if at all, inflamed. When the patient gets down it will be found that the fever is regularly augmented in the afternoon, and during the fore part of the night, when it begins to become more mild and abates considerably against morning; but is again renewed with the same result as before. It, however, is commonly more severe, every other day throughout the course. During the continuance of the fever, the surface is *generally* somewhat above the natural temperature, though it is often not warmer than in health, and frequently as cool or even cooler. Sometimes this fever appears in an acute form, running its course in a few days. In these cases, the brain or heart is most deeply affected, sometimes one of these organs being more diseased and sometimes the other. When the heart is affected, the pulse has an irregular beat, and seems corded, and occasionally intermits; but when the brain is affected there are delirium, pain in the head, with subsultus, intolerence of light, &c. The acute form is sometimes occasionally ushered in with chills. This symptom is, however, seldom observed at the commencement of the subacute. A dry tongue is very common at all periods, but especially in the latter, when it is often brown in the centre, with a flabby in-

active appearance. When the patient attempts to put it out it seems to catch on the teeth. It is sometimes pointed. The former of these symptoms is unfavorable, the latter more so.

It is, probably, unnecessary to say any thing now about the symptoms which mark a favorable termination of the fever. I will, however, make a few remarks on those that are unfavorable. Great irritability of the stomach with pain in it and the bowels, and tenderness of the epigastrium and abdomen generally, are unfavorable; hemorrhage from the bowels is among the most unfavorable symptoms; and still more so is a swelling of the penis; indeed I have but seldom seen a recovery from fever when this symptom supervenes. The want of the tonic contraction of the cremaster muscles is also unfavorable; when this is the case, the testes are found low in the scrotum which is also relaxed. I am inclined to think that when these two last symptoms are present the brain is incurably affected. It might be improper for me to pass over another symptom that I have often witnessed. When you lift one of the forearms, so that it forms with the arm a right angle, and hold it there a few moments, and then take your hand away, if it be retained by the patient in this position, voluntarily, until it begins to tremble, and then falls without a voluntary act of the patient, it may be considered that danger is present and the chances of recovery are few.

We will now take a view of the treatment that should be pursued in the cure of this fever. It must always be borne in mind that it has a duration of from seven days to seven weeks, and is sometimes extended much farther, for, by leaving this matter out of the question, I think I have seen no little damage done. If the physician begins the treatment with an idea that he will terminate the fever in a few days by medicine he will be almost certain to do injury, and will often have to submit to the mortification of losing his patient. It is a matter then of moment that, when the treatment is begun, the physician should come to the conclusion at the outset that he will only attempt to moderate the force of the fever, and that he will direct such means as will have a ten-

dency to establish a healthy condition of the secretions and excretions by degrees: always recollecting that local irritations should be relieved by local as well as general means. By taking a course of this kind very few patients will be lost, because the physician sees a-head and wards off the dangers that lie in the way, whilst he knows that if he ever exhausts the powers of the system it must sink before the disease arrives at the goal pointed out by nature. I would not be willing to say that this fever is in no case arrested in its origin by a decided course of treatment, but I well know how much disappointment I have witnessed growing out of such a course.

The first step to be taken in the acute form of this fever is to bleed until the patient either approaches to syncope or does faint; to effect this, without danger, he should be in a sitting or erect position when bled. As soon as he partially recovers from the effect of the loss of blood, he should be placed in a sitting position, when two or three gallons of cold water ought to be dashed over him; if his head be much affected it should be allowed to fall in a heavy stream on it, for by this means it will be much relieved. It then becomes necessary to administer either a cathartic or an emetic. If the patient have a foul tongue and his head be not much affected, the latter should be preferred; but if these circumstances do not exist the former should be chosen. Should the physician determine in favor of an emetic he will consult the interests of his patient by giving him, in some warm water, half a grain of tartar emetic, and one or two grains of ipecacuanha, combined, every half hour until vomiting is effected. It is now important that a powerful cathartic should be given, composed, in most cases, of calomel and jalap, or for the jalap, castor oil or senna and salts, or, in weak constitutions, rhubarb. After a free cathartic effect has been obtained, tartar emetic should be given in such doses as will not sicken, and be persevered in throughout the disease, unless it should be found that it does not agree with the patient. But few cases will be met with, however, where a twelfth of a grain cannot be borne, and

this amount will be sufficient to begin with, and should it be borne with ease, the dose can be increased as occasion may require. It should be given every four or six hours. After a free cathartic influence has been obtained, twenty grains of calomel should also be given and repeated every six or eight hours, until the mouth becomes sore, or the specific effect is produced on the general system; for many cases will be met with where the mouth cannot be made sore, yet the constitutional influence of the mercury will be obtained. When the calomel has been given until it has produced its specific effect, no more should afterwards be exhibited than enough to keep the secretions of the alimentary canal right. Two or three grains a day will be found sufficient for this purpose, and if profuse salivation should occur, no more should be given for at least a week. It has been a favorite opinion with many, that when salivation is once produced, the fever of course ceases. This opinion is, however, fallacious, for nothing is more common than to see the fever go on for weeks after the specific influence of mercury has been induced. It is true that it is generally mitigated by the mercurial action, but by no means always destroyed.

When the disease commences in a slow manner, the patient not even complaining of chilliness, it may be called subacute, and must be treated more mildly. If there be no tenderness of the epigastrium, and if the brain be not affected, the treatment may be commenced with an emetic, after which a dose of calomel and jalap or rhubarb should be administered, and repeated every few hours until it operates. So soon as the bowels are cleared, antimonials should be given and continued as directed above. Five grains of calomel, or more, should be given every four or six hours until the mouth is made slightly sore, or the general system is affected, which will be known by an increased fulness and regularity of the pulse. When this is brought about, all has been done that can be advantageously accomplished by mercury in large doses. As in acute cases the action of the liver and the secretions and excretions of the abdominal viscera, generally, should be kept in a proper state

of activity. This can be best done by calomel or the blue pill. I am much in favor of the latter in female patients, and in all delicate or enfeebled constitutions. One or two alvine evacuations should be procured daily through the fore and middle part of the fever; but if it continue for a long time, as for more than two weeks, I would only wish one evacuation a day, or one every other, or every third day, if the patient should be very low. Rhubarb, combined with compound extract of colocynth and a small proportion of ipecacuanha, will form a very good combination for the purpose; the physician will, however, find jalap, salts, and senna, and magnesia to answer a good purpose.

When there is local inflammation or congestion of the brain, or of any other part of the system, whether in the acute or subacute form of the disease, attention must be given to it. If in the brain or its membranes, keeping the hair wet with cold or tepid water, will be of use. Cupping on the temples, or back of the neck, will also be of much service. Should these not relieve, I would advise blistering on the head or neck. When there is pain in the small of the back, cupping and blistering will be of much service. If the stomach be irritable, or if there be tenderness of the epigastrium, cupping should be used and after it blistering. If the patient be weak, it would be better not to scarify. If there be pain or tenderness generally diffused over the abdomen, cupping should never be neglected. Half a dozen cups either with or without scarification, will give great relief, and this may be repeated several times, if the irritability continue. Local applications may be used with advantage.

It is a matter of moment in the treatment of this fever, that nothing shall be done to bring the pulse below the natural standard for any length of time. I would always prefer having a pulse a little above this standard. When it falls below means should be taken to raise it. This is effected by the addition of camphor, ammonia, good wine or brandy. Opium will often be found useful, particularly when combined with ipecacuanha, but I think five grain doses of camphor

with a grain of ipecacuanha, if the latter be admissible will answer a better purpose than most other stimulants. Sulphate of morphia or opium may be added if thought proper. If these three medicines be given in combination, when there is a disposition to sweat, their effects will be most salutary. I should not neglect to observe that sulphate of quinine if given in moderate doses, is a medicine of great value in the treatment of this fever when much debility is present.

Much has been said for and against bleeding in the cure of this fever, and it has been urged that physicians who have been in the habit of bleeding for it have often been unfortunate; this I cannot deny. Bleeding is but seldom necessary as the warm or cold affusion will generally moderate the force of the fever more safely than bleeding; indeed I would advise the young practitioner to resort to the lancet with much caution, for if he bleeds so that the pulse does not regain a firm beat he will assuredly lose his patient.

Sometimes after this fever has existed for a number of days, or even weeks, hemorrhage from the bowels takes place. This may be feared, when the tongue of a sudden loses a thick coat, which comes off in flakes, and leaves the surface smooth and red with a polished appearance, and in cases where but little emaciation has taken place, and where there is fulness of the abdomen. The most common cause of its appearance is excessive purgation for a number of days. This is particularly the case where calomel has been given in large quantities at the same time that cold water has been administered largely. Some practitioners never give up the administration of calomel in frightful doses, until their patients are either salivated or poisoned to death. Uninterrupted purging is wrong, and giving mercury with an idea that it does no good unless the patient be salivated is as bad. This most potent medicine is shamefully abused in this way, and I am not certain but that its indiscriminate exhibition with cold drinks often has a most injurious tendency. When hemorrhage occurs it becomes necessary at once to cease giving the purgative medicine, and to give opiates every six or eight hours, until the

bleeding ceases. The addition of ipecacuanha to the opium will be useful, and if but little mercury has been administered, moderate quantities of calomel should be combined with the opium or morphine. Dry cupping will be important over the abdomen, after which a blister should be applied. Purging must not be attempted under four or five days, when rhubarb or castor oil should be given slowly until the operation is procured; when this is effected, great care should be taken to avoid frequent purging. Quinine is often of much use after great loss of blood in this way; wine and brandy are also useful. The first cases of this affection which I saw all terminated unfavorably; indeed I at one time almost came to the conclusion that death was inevitable, but eventually being called to a case in my own practice, where the family had given large doses of salts, I concluded that I would try calomel, opium and ipecacuanha, and I had the satisfaction of saving my patient, and have not lost one since with bleeding from the bowels. I did not suffer the patient in this case to take any cathartic medicine for more than a week. However, in about five days he had an operation from the effects of the calomel. When I first saw this patient I thought all was over with him as I found him in a fainting condition from the loss of blood. Since the time I attended this case I have seen several nearly as bad and some much worse, yet they all recovered.

In conclusion I may observe, that if the method which I have laid down for the treatment of this fever be pursued but few cases will be lost. During a residence as a practitioner of medicine in this district of country, which I have described, for eighteen years, I lost but very few cases, probably not more than one in each year, and indeed I shall always look back with pleasure upon my success in the treatment of these cases.

Oct., 1841.

ART. IV.—*A case of injury of the Head with loss of a portion of the Brain and recovery.* By Dr. THO. H. TODD, of Starkville, Mississippi.

At dusk, on the 3d of August, 1838, I was called to visit a boy belonging to Col. R. S. Lyon, ten miles in the country, who had been thrown from a horse early that evening. My brother, Dr. J. J. Todd, reached the patient about 10 o'clock at night. He fonnd the boy, aged 10 or 12, very stupid and dull, yet he was rational and could be roused to a state of consciousness; he had vomited occasionally and had three or four fits before he saw him. On examining the wound he found the bone extensively fractured and very much depressed. Not having prepared himself with instuments to go into an operation; he sent for me to assist him, and to get the necessary instruments. I did not reach the place before 11 o'clock next day, when we proceeded at once to operate.

The boy had been thrown from a horse and the animal kicked him as he fell. The injury was over the right eye, midway between the superciliary ridge and the edge of the hair, lacerating the soft parts an inch and a half. The hemorrhage was profuse at the time, and we could now discover a considerable quantity of cerebral matter adhering to the adjacent parts. After placing the patient upon a table, we lengthened the wound in the integuments, and made a second incision at right-angles with the former, and dissected up the integuments, until the injury done the bone was fairly exposed. The fracture was extensive, and several portions of bone were found driven through the drura-mater, and penetrating the substance of the brain. We elevated and removed all the detached portions of bone, which left an opening something larger than a half dollar piece of silver; when this was done we removed a teaspoonful, perhaps, of the substance of the brain and several coagula of dark color, which was followed by considerable hemorrhage. After the operation was thus far completed we took one stitch to aid the adhesive strips in keeping the lips

of the wound in contact, and applied a compress and the six-tailed bandage to keep the dressing to its proper place. A tickling sensation over the abdomen, with a constant desire to scratch and have it rubbed, attended during the whole time of the operation. We left the boy comfortable, though somewhat exhausted.

5th. Patient has rested well; no excitement. Ordered rhubarb and calcined magnesia to move the bowels.

6th. Has rested well and seems cheerful; some excitement; bled him, and gave a dose of ol. ricini, as the bowels have not been moved since last visit. Directed the lancet to be used if excitement returned; diet to consist of water gruel.

7th. Oil operated well; it was found necessary to repeat the bleeding last night; and still there is too much arterial action; bled him moderately which reduced the pulse and produced quietness.

8th. Rested well; appears cheerful; wound beginning to suppurate; tongue furred. Ordered a small dose of calomel and ipecac.

9th. Medicine operated very well; wound suppurating finely; symptoms good as heretofore.

10th. Patient more restless last night than usual; some excitement; the nurse thought he had a fit this morning; mind still clear; no headache; bled twice during the day, which removed the excitement and rendered the skin soft.

12th. Patient doing well; all the symptoms being favorable.

15th. The general symptoms continue favorable; a fungus cerebri has, however, made its appearance since last date for which a compress has been applied.

20th. The fungus seems to be gradually diminishing in size. From this time the boy's improvement was steady. He is now in fine health and his mind is unimpaired.

December, 1841.

ART. V.—*Case of Chronic Cystitis, terminating fatally.* By Dr. R. B. HARPER, of Tipton county, Tennessee.

The subject of this case was a boy 3 years of age, the son of N. H. N. of this county. The history of the case as given by the parents was as follows: Some time during the latter end of last autumn, their son told them that a rail had fallen on him, but it gave them little uneasiness as he did not complain of much pain. The first symptom that excited alarm was the passage with his urine of a considerable quantity of blood. This discharge kept up for several days, becoming mingled with what appeared to be pus—sometimes with long white lumps, as his parents expressed it, which evidently was coagulated lymph. This symptom occurred early in January. After a time the lymph ceased to be discharged and he began to experience great difficulty in voiding his urine. The usual preparation of balsam copaiva was prescribed by a physician, but without any advantage. The urine was voided drop by drop, and accumulating in the bladder gave him great distress. I was applied to on the 19th of March, and on examination found the bladder much distended, the external orifice of the urethra inflamed, the desire to micturate incessant, and the discharge of urine which was scant attended with severe pain.

I prescribed an ointment which removed the inflammation of the external orifice of the urethra, and relieved the pain of micturition. Ordered cathartics, blisters and uva ursi, which generally afford relief in such cases, but in this without benefit, as the bladder continued to be distended. I resorted to the use of the catheter and pressure on the abdomen, but with no better results. The urine did not flow through the catheter, and yet I was satisfied that there was no mechanical obstruction, and that the difficulty grew out of a deposit of coagulable lymph in the bladder which had nearly filled its cavity. This was verified by the autopsy, which was afforded by the death of the patient, inflammation of the brain having supervened and terminated his sufferings on the 20th of April.

Autopsy. An incision having been made above the pubis into the bladder it discovered that it was nearly filled with coagulated lymph, amounting to about half a pint in quantity. It had formed an attachment to the bladder on its surface between the ureters. A portion of the lymph was pendulous, and extended into the neck of the bladder. That portion was red and apparently organized, resembling the heart of a squirrel. Other portions were white and fibrous in their texture with bloodvessels passing through their substance. I have preserved the specimen for the Pathological Cabinet of the Medical Institute of Louisville.

I will subjoin a memorandum of a case of *ovarian dropsy*, in which I resorted to tapping with success.

Mrs. F., of Obion county, æt. 35 years, was the subject of this disease, which had existed about 10 years. I resorted to an operation on the 12th of May, 1840, and drew off four gallons of water. The fluid has not collected again, and the lady now enjoys excellent health.

May 4, 1841.

ART. VI.—*A Description of the different grades of Bilious Remittent Fever, as they occur in the Wabash Valley and particularly in Clark county, Illinois.* By JAMES SMICK, M. D., of Darwin.

The valley of the Wabash furnishes the most extensive field for observation on the grades of bilious fever, with which I am acquainted; and it may not perhaps be uninteresting to the medical profession for me to state what my experience has taught me on that subject during a residence of eleven years in Darwin, Clark county, Illinois.

TOPOGRAPHY.—The Wabash is a beautiful river, running generally south. Its banks are very low, and extend back from one to three miles. Darwin is situated on a bluff bank

on the west side of the river about eighteen feet above high water mark, at the upper end of Walnut prairie which stretches southward from it. At the south end of the prairie, Mill Creek empties into the river about six miles below Darwin. The ground for three or four miles above its mouth is very low, and liable to be overflowed at a high stage of water. East of Darwin on the opposite side of the river is a low bottom four miles wide. The land next to the river is higher than it is back. Several small bayous lead back to the lower grounds. North of Darwin about 5 miles, Big Creek empties into the river. The land about its mouth is for some distance very low also, and is overflowed as well as about the mouths of some smaller streams which empty between it and Darwin. West of Darwin about a mile we meet a low strip of land which bounds the prairie westward and encircles it. There are also on the prairie some bayous leading from the river to basins, forming ponds. In a high stage of water these are large, covering many acres and are never entirely dry. The face of the country is generally level. The soil is alluvial and very rich, consisting of sand and black loam. There is a much greater proportion of sand in the soil of the high prairie than of the low lands which are overflowed. The bottoms are covered with a heavy growth of timber, such as is peculiar to a very rich soil. On the edges of the prairie it is shrubby in consequence of the annual burning of the prairie before it was settled. Such of the above described lands as are overflowed are, after the month of May, covered with a very rank growth of vegetation of every kind. Such of the prairie as is not under cultivation is covered with a heavy growth of prairie grass, sometimes six or eight feet high. The low strip of land, west of the prairie, between the breaks of Big and Mill creeks, is what we call barrens. The soil is of a more argillaceous nature and consequently very wet. Though I have here described a limited tract of country, yet the general features of this description apply with but little variation to the whole valley of the Wabash through its length, so far as I have travelled over it. The general character, too, of the diseases is the same through the whole valley.

We generally have a very high stage of water sometime during the months of March, April, or the first part of May. This general rule has never failed since my residence here but in one year, 1833, when we had no high water until the last of June. Some years we have two freshets. In 1834 and 1836, the second came in the last of May and first of June. In 1837 the second rise came in July.

We have more or less of every grade of fever from the simplest intermittent to the most fatal remittent, every year. But in those years in which there has been a late rise of the river we had an unusual number of cases of the severest grade. Our sickly season, as it is familiarly called here, begins about the 1st of July and continues until the frosts in the fall. Usually in the latter part of June and the first of July cases of diarrhœa and cholera-morbus occur; then some of the milder cases of remittent fever; and about the first of August the severe grade make their appearance.

Predisposing Causes.—Among the predisposing causes the first and principal is marsh-miasma. All that is necessary to produce it exists abundantly every season, i. e., heat, moisture, and vegetable decomposition, but most abundantly in those seasons in which the river overflows its banks after vegetation has sprung up in the bottoms. Then, after the water has retired, the smell of decaying vegetable matter is very perceptible. The heavy growth of timber upon the bottom lands delays the process of decomposition, as it presents the full action of the sun upon the decaying vegetation and prevents the escape of miasmata already generated. In those seasons when we have a late rise, we have not only an additional number of cases, but an increased malignancy in the character of the disease. This fact, together with the smell which in those seasons is so distinguishable, indicates the real source of malaria. In those seasons congestive and hepatic modification of bilious fever were by far the most common, and the cases were the most numerous, every family suffering more or less—the old settlers being the most exempt.

In those seasons in which the river takes no late rise, sick-

ness is confined to the neighborhood of the ponds, to those spots where a large quantity of grass grows in the river, or where the current is not swift enough to carry off all decaying matter, and to the neighborhood of mill ponds. The turning of a heavy coat of prairie grass under in the fall and opening it in the spring to the action of the sun is, I think, a very fruitful cause of miasma. It would seem also that corn, when growing very rank, throws out malaira: for those families whose houses are closely surrounded by it on all sides are sick more or less every year. Where the bottom logs of a house are in a state of decay, or the floor rests upon the ground, the inhabitants suffer every year. Our summers are warm, the thermometer standing often as high as 96°. Probably those rainy summers in which the river takes a second rise, are not as warm as the drier ones, though here I cannot speak positively as I have no thermometer. Exposure upon the prairie to the heat of the sun and the reflection of this heat from the sand, stimulating the liver to morbid action, is a predisposing cause of fever.

Persons coming from a healthy region, or where there is little of the chill and fever and residing on the Wabash amidst these various causes of disease, are universally sick the first or second year after their removal, unless they are laboring under some chronic disease. If this is the case their health usually improves. Nervous temperaments are not so liable to fever here as bilious and sanguine.

Exciting Causes.—Among these may be reckoned overloading the stomach with indigestible food or with such as will sour; exposure to the north or north-east wind which is quite cold even in the month of August. The change occasioned by the rise of this wind is very sudden sometimes, and very great. The thermometer may, in two hours, sink from 90° to 60°. Such a sudden reduction of heat in the surrounding air throws the fluids in from the surface upon the internal organs of the system. I think such exposure the most common cause of relapse. Any sudden check of perspiration operates as an exciting cause; the drinking of old

drinks when the system is preternaturally heated—sleeping with open windows and doors; marsh miasma becomes an exciting cause when applied in this way. Fatigue may justly be reckoned another of these causes.

Prophylactics.—A residence should always be chosen on the west or south-west side of marshes, or of the river, and a skirt of timber should be left between the house and the source of miasma, where it exists naturally; and if not, one should be planted so as to intercept the miasma. Where it is possible ponds should be drained. And where the banks of the river will permit levees should be thown across the mouths of the bayous, to prevent the influx of water during a fresh. The under-growth should be cut out of the low timbered bottoms, and a sufficient number of cattle kept in them to destroy the growth of the wild vegetation, until the tame grasses can be made completely to sod them. Houses without cellars should be sufficiently elevated to admit a current of air under them. A heavy growth should not be permitted in the yard of any kind of vegetation, with the exception of blue grass and shade trees. Corn should not grow very near.

I think that if the above hints are appreciated by the people of the Wabash as they deserve to be, and are once acted upon, we may expect to enjoy a freedom from such sickness as now yearly visits us. Those whose bowels are costive or who are subject to a bilious purging, should take a dose of blue pills as often as is necessary to correct either, and carefully avoid all crude indigestible articles of food and any exposure to the cold north or north-east winds.

Pathology.—I do not expect, under this head, to discuss the various theories that exist upon this subject, but to give what I conceive to be the true pathology of bilious fever, from the observations which my limited means have enabled me to make. Both the anatomical theory of Broussias and his followers, and the congestive theory of Armstrong and his followers are founded in error; taking an effect of the fever for the cause. The reasoning by which these great theories are sustained, is too well known to the profession for me to

mention it here. My own ideas cannot be better expressed than in the words of Prof. Yandell, occurring in his essay on bilious fever in the Western Journal of Medicine and Surgery, September number, 1841, page 179: "The malaria exerts its first influence upon the nervous system. The nerves of the cerebro-spinal axis are first disturbed. Hence the languor and general malaise, the precursors of an attack of fever. The nervous system is marked by a peculiar law—that of periodicity or intermission. It is active, and reposes by turns. Repose is essential to its health. Intermission being an attribute of the tissue which sustains the first morbid impression, the same character is stamped upon the disease. All essential fevers exhibit this tendency, and in one type, the intermission is complete. All diseases located in the nervous system are intermittent, notwithstanding that the cause may be permanent. A spicula of bone, for example, irritating the brain may excite epilepsy recurring at distant intervals, though the irritation be always present. And, in like manner, coma, catalepsy and hysteria recur periodically, while the cause of irritation may be some permanent organic lesion. In fever, the system of nerves controlling animal life being depressed, all parts of the system—the skin, the viscera, and all the organs of circulation—are disturbed with it. For it is not mere depression of action; it is action also perverted. Congestions of the viscera, abdominal, thoracic, and cerebral, occur, which changes of temperature, irregularities of all sorts, fatigue, etc., especially favor; and these congestions being repeated, to be followed, still, by violent reaction, lesions at length are established in some system of organs, and become independent foci of irritation, reacting upon the cerebro-spinal axis, and increasing and perpetuating the morbid commotion." This constitutes the first class of phenomena in fever and "the repetition and excessive amount of the local congestions recurring in the cold stages of fevers, give rise to a hyperæmic condition of the affected organs. This condition frequently excited leads at least to local inflammation. New local inflammations are set up in various organs, and those which, in the

beginning were only the effect of disease, become by reaction on the system the cause of its continuance." In one case it produces inflammation of the mucous surface of the stomach and bowels during the continuance of the febrile excitement. This condition commences at the first with the chill and continues only until the fever subsides; but after a few paroxysms the inflammation lasts all the time. This constitutes what may be termed gastric remittent fever, and in another case it may produce the same effects on the stomach and bowels, deep-seated congestion in various organs, followed by a broken reaction and in some cases by no reaction at all. This constitutes what is usually termed congestive fever. And in other cases, a more violent reaction follows the chill, which assumes a continued form, with violent congestion of the liver, which seems in some cases completely locked up, and in others to take on a morbid action, throwing out a large quantity of irritated bile with great oppression of the ganglionic plexus of nerves supplying the liver. This constitutes what may be termed the hepatic modification of bilious fever.

Thus we have varieties of bilious remittent fever, marked by sufficiently distinct symptoms, which for therapeutical purposes should be considered under different heads.

Perhaps the advocates of the anatomical theory examined cases of the first two varieties above mentioned, which would give, on a post-mortem examination, the appearances which they claim. And perhaps the advocates of the congestive theory examined only cases of the last variety, in support of their theory. And this may be the reason why they have not better argued. I make this as a mere suggestion, hoping it may excite the attention of some one whose opportunities will enable him to make the observations necessary in order to arrive at correct conclusions on this subject. So far as my observation relative to the different varieties of bilious fever, as it has occurred here, in the Wabash valley, during an extensive practice of eleven years, has extended, all the cases which have come within my notice have assumed some one of the above forms, with the exception of the simple intermittent

and the common bilious remittent fever of authors. That I may be better understood, I will treat each class separately.

1st. Gastric Modification of Bilious Remittent Fever.—This is the mildest of the three varieties. It commences with a chill followed by a fever, and in its mildest form, a slight fever occurs on the evening of the next day after the attack, lasting until the recurrence of the chill on the third day. After a few paroxysms in this way, usually at the commencement of the third chill, a severe vomiting comes on and continues until reaction is fairly established, which is after about three hours, and then a purging succeeds, which continues as long as the excitement lasts. In the first paroxysm, which is attended with vomiting, the drinks that are taken, and in some cases bile, are all that is thrown up. But in a majority of cases during the succeeding paroxysms, blood is both vomited and purged, in some cases abundantly, in others in moderate quantity. At this stage the patient complains of great heat at the stomach, with an intolerable thirst; and if drinks are taken to satisfy it they are immediately rejected. In a majority of the cases, during the continuance of the purging, severe pains are complained of through the whole region of the bowels. These last mentioned symptoms are experienced only in the paroxysms which are preceded by a chill. When this variety takes on the severest form, the chill is of the quotidian type, and of course the respite between the paroxysms is not so long; and the disease terminates sooner. If it does not prove fatal before the ninth day, as it dose in the severe form, unless arrested by medicine; it assumes the form of diarrhœa attended with chronic gastro-enteritic inflammation, which in most cases yields very slowly to medicine. The pulse is very rapid, but in general not very strong during the whole course of the disease, but more especially so after the vomiting and purging of blood takes place. The heat of the surface during the fever is very considerable, but in most cases terminates in a gentle, and in some cases, a profuse perspiration.

The tongue is oftenest covered with a white coating, sometimes, however, with a yellow one ; during the first few paroxysms it is moist, then it becomes dry during the paroxysm, and when the disease assumes the chronic form mentioned above, it is covered with a dry brown coat. The breathing during the paroxysms is very irregular. Just before vomiting it is very quick and somewhat laborious ; and immediately after, or while the patient is free from extreme sickness at the stomach, it is quite easy, and sometimes rather slow. The countenance expresses considerable anxiety ; the features are sharp ; the eyes are sunken ; and when the disease continues long, they become inflamed. The patient sleeps with them partly open, and before a fatal termination, they are almost entirely open and turned upwards and back. Subsultus tendinum sometimes attends the last stage, but not so frequently as in some of the other forms. An irresistible disposition to sleep comes on before death, from which the patient frequently starts as if alarmed.

I regard as the most unfavorable symptoms, a copious watery or bloody purging, which is not easily controlled by medicines—the patient's showing by moaning, talking in sleep, and other signs that he is in considerable pain, while if asked he replies that he feels well—a brown dry tongue; small feeble pulse, and somnolency amounting in some cases to complete stupor. In 1833 and 1834 the vomiting and purging were, in a majority of cases, attended with severe cramping of the arms and legs and abdomen ; since then it occurs more rarely, but attends in some cases every year. This form of fever sometimes runs into the congestive form, especially if emetics of tartar are used.

Diagnosis.—This form of fever is distinguished, first, from the congestive form by its having a regular stage of excitement after each chill and less sweating. The surface is more full than in the congestive form—not so contracted. The tongue is also drier. This form is attended also with more pain, especially in the bowels, and with more acute feeling generally than the congestive variety.

Secondly; it is distinguished from the hepatic variety by its having a chill before every other and in some cases every paroxysm, with an intermission in some cases, and in others, a distinct remission. The skin and conjunctiva of the eyes are not so yellow in this form as in the hepatic.

Treatment.—In this variety there are two great indications of cure: First, to allay the irritation of the stomach and bowels, and moderate the excessive febrile excitement; and, secondly, during the remission or intermission, if there be one, to prevent the recurrence of the next paroxysm. To accomplish the first, should there be much vomiting, I give a draught of soda water in a state of effervescence, with 18 or 20 drops of laudanum in it, immediately after each vomiting. If this should not be sufficient to stop it, give 20 drops of laudanum with 6 drops of essence of peppermint every two hours; apply also a sinapism to the pit of the stomach. Where the above remedies do not lie upon the stomach long enough to have the desired effect, apply a cloth wet in laudanum, or opium moistened sufficiently to admit of its being spread, to the pit of the stomach, after the mustard seed poultice is taken off. Let this remain as long as there is any sickness at the stomach. And to moderate the febrile excitement, I give a teaspoonful of spirits nitre dulcis every two hours, and sponge the surface with equal parts of warm vinegar and water, or weak soap-suds warm, as often as the heat is considerable. Applied warm it has a much better effect then when applied cold. It hastens the third or sweating stage, which terminates the paroxysm. It should be applied freely and often—as often as is necessary to keep down the excessive heat. After the irritation is sufficiently subsided, give powders composed of 6 grains of calomel and ¼ grain of opium, where there is much purging ½ grain, every three hours until three or four are taken. If they do not operate sufficiently within four or five hours after the last is taken, give a dose of castor oil or rhubarb, sufficient to operate. As soon as the operations become watery and large, check the purging with laudanum or opium in substance. If

the chill should recur while the system is under the operation of the physic, the vomiting and purging will be much greater in the next paroxysm; therefore, the operation of it should be checked always before it is expected. I follow this course in each paroxysm, until the secretions in general become free and healthy, especially from the liver, or the fever is checked by means hereafter mentioned, to be used during the remission or intermission. Where the patient has been once salivated, or the constitution is easily affected by calomel, its effects should be closely watched upon the glandular system and its use never continued long enough to produce ptyalism, if it can be avoided. I have never seen any good, but on the contrary, much inconvenience, as the result of such a state. Calomel in small unirritating doses, repeated at short intervals, worked off by some mild cathartic, at a time when the system is freest from irritation, while its effects upon the glandular system are fully ascertained before more is given, produces a much better effect in this and the congestive form of fever, according to my experience, than when given in large doses.

The effect produced by it is more under the control of the physician. The use of opium under any circumstances, during the febrile excitement, is, I know, strongly objected to by almost all writers on this subject. The successful operation of the other remedies depends upon the promptness with which the irritation of the stomach and bowels is allayed; and I have found no medicine to answer this purpose, in this and the congestive variety of fever, better than opium or laudanum. The injury said to be produced by it upon the brain, I have never seen to follow its use. The delirium is no greater after than before it was given, but the ease experienced by the sufferer is almost indescribable. The torpor of the bowels, feared from its use, does not follow when it is given as directed above. It is to be given only where the vomiting and purging are too severe to be permitted to continue; and these are to be controlled at any time regardless of the fever.

To answer the second grand indication, in recent cases and all others at any stage, where the symptoms indicate no inflammation of the stomach and bowels, or any other important organ, during the remission I give large doses of quinine in the paroxysm that is preceded by a chill, just before it comes on: say from 1 to 10 grains, varying the dose according to the age and condition of the patient. My usual portion is 6 grains for an adult. The first dose of this size should be given about four hours before the chill is expected; and a second, one hour before the chill. And in cases where the disease has existed some days, or where the chill is of the quotidian type, a portion should be given every six hours, until the time for the next regular paroxysm has passed. This is necessary in order to prevent the recurrence of the chill, which sometimes supervenes eight hours after its usual time, in cases where this precaution is not taken. In recent cases this is unnecessary. The last portion may be given two hours before the time of the regular paroxysm.

Large doses of quinine have succeeded in my hands far better than smaller ones, both in this and the congestive form of fever. In cases where the tenderness of the bowels on pressure, the dry tongue, and the excitement continuing from chill to chill contraindicate the use of quinine, I give a powder composed of 3 grains of gum camphor, 4 grains of calomel and $\frac{2}{3}$ grain of opium once in three hours, commencing seven hours before the chill is expected, until three of them are given. These should be repeated, commencing seven hours before the recurrence of the next chill. In most cases the first course will check the chill, but the fever is apt to rise at about its usual period, but it also disappears after the second course of powders. When these camphor powders are used during the remission, the calomel and opium powders directed to be used in the stage of excitement are to be omitted. In their stead a cathartic of castor oil may be administered, whose operation should be over when the time arrives for the use of the camphor powders. This ca-

thartic should follow each course of powders, unless the bowels are sufficiently moved without it.

When the disease assumes the chronic form, a pill may be given composed of 1 grain opium, 4 grains calomel, and 2 grains ipecac. once in three hours until four are taken, following them in about four hours with a dose of castor oil and 8 or 10 drops of turpentine, unless the bowels are sufficiently moved without.

These pills followed by the oil and turpentine should be repeated every twenty-four hours, until the operations become healthy, and the pain and tenderness of the epigastric region, and the excessive purging are entirely relived. As soon as the calomel in the above receipt affects the mouth, it should be discontinued, while the other medicines are to be still given. The drinks should be gum water, slippery elm water and the like. If the case does not yield readily to the above means, a blister should be applied to the bowels, sufficiently large to cover the whole seat of the pain. Where there is a copious bloody purging, large doses of opium have in my hands had the best effects in stopping it. In severe cases I have given with the happiest effects, as much as 4 grains every four hours, but the dose should be varied to suit existing circumstances. When large quantities of yellow bile are vomited, laudanum will not arrest it; two or three swallows of water as hot as it can be taken, drank occasionally, and after each spell of vomiting, will succeed in so reducing the quantity of bile that laudanum will arrest it entirely.

2dly. The Congestive variety of Bilious Remittent Fever.—This is a more fatal form of fever than the preceding. It is nothing more nor less than the "algid intermittent" of Alibert. Its type is the same as that of the preceding variety, except that the chill oftener precedes fever every day than in the former. The chill continues from one to six hours before the excitement follows; this, though sometimes considerable, does not in the majority of cases rise very high. In many cases the patient complains of great

heat of the surface, while the skin continues only cold. In most instances there is a copious perspiration standing in great drops on many parts of the system, warm where the surface is warm and cold where it is cold. Sometimes this perspiration appears only while the sickness is great. There is always great irritation of the stomach and bowels. Vomiting usually commences with the chill and continues at intervals through the paroxysm if not prevented by medicine. The fluid vomited is for the most part the drinks that are taken, sometimes accompanied with blood. Sometimes there is in the vomited fluid a substance resembling small pieces of flesh floating. The operations from the bowels are very large and watery and tinged with bile. In other instances clear blood is vomited, and in others still a fluid resembling the washings of meat, or sometimes of a whitish or rather milky color. The countenance is ghastly and very expressive of anxiety, the lips generally blue, the eyes deeply sunken, and the tongue moist and generally not very thickly furred, and livid spots appear on various parts of the body.

The senses are not much affected, sometimes indeed the intellectual faculties are rather acute and the patient disposed to talk a great deal. The voice is hollow and sometimes reduced to a whisper. Occasionally indeed we see them become delirius as soon as the fever rises, and sink into a state of complete stupor from which it is difficult to arouse them until the paroxysm has passed. In such cases there is less purging than in the others, and less sweating until the fever begins to subside. The breathing, when the surface is covered with a cold sweat and the mind is not much affected, is frequently made by a long deep sigh; and when stupor prevails is more laborious still. The patient is generally very restless, tosses about a great deal, but does not suffer much pain. Incoherent speech, subsultus tendinum, involuntary discharges of the bowels and a marble coldness of the extremities, are symptoms which generally precede a fatal termination.

Diagnosis.—In this variety the excitement which follows

the chill is not so regular. The surface, especially the extremities, are much cooler and covered with a more profuse perspiration. The tongue is also more moist than it is in the former variety. It is distinguished from the hepatic variety by a more general perspiration, and a less excitement, and a marked state of intermission or remission.

Treatment.—In this variety we have three great indications of cure; first, to allay the irritation of the stomach and bowels. Second, to moderate the excitement where that exists, and where the reaction is broken or not established, to produce an equilibrium of excitement through the system in the paroxysm; and, Thirdly, during the intermission or remission to prevent a recurrence of the paroxysm.

To fulfil the first I use about the same remedies recommended for this purpose in the gastric variety, viz: laudanum in soda water, or peppermint and laudanum, the sinapism to the stomach, and the application of moistened opium after the mustard seed poultice is taken off. These must be varied to suit existing circumstances. After the irritation is in some degree allayed, a general reaction sometimes follows without the use of revulsives. It is therefore absolutely necessary that this should be sufficiently allayed to check the vomiting and purging, or our effort to produce reaction will be unavailing. After the vomiting and purging are sufficiently allayed, a powder composed of 1 gr. opium, 6 grs. calomel and 2 grs. camphor should be given every four hours until four are taken. And in those cases where the intermission is not sufficiently long to admit the use of quinine, according to directions to be given, the powders should be so administered that the last one will be taken about an hour before the recurrence of the paroxysm. Cathartics should be used very carefully in this form of fever, but if the bowels should not be moved within six or eight hours after the last powder is taken, let oil be given if it can fairly operate before another chill is expected; if not, defer it until the chill has passed and its accompanying irritation has subsided. I generally combine camphor with all the calomel which I give in this form; it seems to facilitate

its action upon the system, causing it to produce the desired effect sooner. In severe cases I repeat the powders every twenty-four hours, and in milder ones every thirty-six hours until the discharges show a healthy state of secretion, especially from the bowels, and from the liver, or until the calomel affects the mouth. A cathartic should follow each course of powders unless the bowels are sufficiently moved without it. To moderate the excitement, where that is excessive, the surface should be frequently sponged with warm vinegar and water as in the former variety. Where the reaction is broken let the surface be rubbed with warm camphor and warm vinegar with cayenne pepper boiled in it alternately. The rubbing should be resorted to every few minutes; it should be brisk and done under the bed-clothes. And should the extremities be very cold they should be wiped off dry and wrapped in warm dry flannels after each rubbing. Warm brandy may also be rubbed on with advantage. This rubbing should be diligently maintained in cases requiring it until reaction is fairly established. But if the system should run into a complete state of collapse, or should it be in that state when the physician is called, the "cold water dash" should be resorted to. A quantity of water should be poured from a pitcher or small pail for a minute or two upon the surface, which should then be wiped off dry as quick as possible and wrapped in warm blankets. A little brandy toddy sweetened well with loaf sugar should be given immediately after, and if the purging is great, 25 or 30 drops of laudanum. It is important too that the rubbing, spoken of above, should be kept up from time to time under the clothes. If reaction does not ensue in an hour and a half after the application of water, let it be repeated in the same manner. This will succeed when no other remedy will, and should never be neglected in the asphyxiated stage. After reaction is fairly established the treatment before recommended should be pursued. The third indication of cure is to prevent if possible the recurrence of the chill, and to secure this result large doses of quinine answer better than any and all other remedies that my ingenuity

could invent, or that I have ever seen recommended by authors for this purpose. Indeed it is the only thing that can be relied upon, and even that, in some cases, fails. As soon as the remission or intermission is sufficiently distinct, it should be given in 10 gr. doses every six hours, and so timed that the last powder shall be taken about an hour before the chill is expected. And if there should be an error in the calculation of the time and the chill should return sooner than it was expected, a portion should be given as soon as the symptoms of its return are felt. It should be resorted to in each interval of fever, unless some symptom should contra-indicate its use—such as a stomach too irritable to receive and retain it, severe pain in the stomach, or pain in the head with large bloody discharges from the bowels. In such cases, which are but few, it should be omitted and the camphor powders mentioned above should be given before the chill, so that the system may be under their influence when its time arrives.

When the patient sinks into a state of stupor, I apply a blister to the back of the neck, baths of mustard seed to the soles of the feet, and wet the head frequently with spirits of camphor or vinegar and water, in addition to other remedies. Whenever large quantities of clear blood or bloody water are discharged from the bowels, opium pills in 2 gr. doses should be given every three hours until it is stopped. After the patient becomes convalescent, which is between the third and seventh day, he should take an occasional dose of blue pills to keep the bowels regular, and some tonic mixture to restore the tone of the stomach, either small doses of quinine or a bitter made of Peruvian barks, gentian and rhubarb in wine or brandy, and taken three or four times a day for some days This facilitates the recovery very much, and at the same time tends to prevent a relapse, a thing very apt to occur both after this form of fever and the gastric variety.

3dly. The Hepatic Modification of Bilious Fever.—This form so far as my observation goes is by far the most fatal one: it is very malignant in its character. It may very justly be compared to a "dog that bites without barking." Its

attack is very insidious. The patient complains for several days of not feeling very well, and in the evening has a little fever, but not sufficient often even to attract his attention, much less to cause him to take medicine. It may exist a week in this way before it is fully developed. In such an attack it is not preceded by a chill, but often its approach is more sudden, commencing with a short chill followed by a high fever that takes on the continued form. In some instances there are evening exacerbations, and slight morning remissions growing less and less distinct; in others the exacerbations last from 1 o'clock to 6 in the evening, and from 1 o'clock to 6 in the morning with evening and morning remissions, showing two distinct paroxysms in 24 hours. Sometimes these paroxysms are preceded by slight chilly sensations in the back and some little coldness of the fingers and toes. Generally a severe pain is felt in the forehead immediately above the eyes and in the back part of the head, and a severe aching in the knee joints and bones generally. The pulse is at first quick and generally strong, and sometimes hard, but after the disease takes on a typhoid type, it is very frequent, beating as often as 150 a minute; sometimes rather intermittent, at others weak. During the exacerbation strong pulsation can be perceived in the carotid and temporal arteries at some distance from the bed-side. A throbbing can be distinctly felt in the right hypochondrium and epigastrium. The surface is at first of a red and sometimes of a yellow hue, but does not usually assume the yellow appearance before the third or fifth day. The cheeks are at first flushed, but after the seventh day, sometimes later, they assume a cadaverous appearance. The countenance at this time is very ghastly, the face hippocratic. There is a great restlessness, especially after the irritable excitement comes on, in the typhoid stage. The tongue is at first coated over with a thick yellow fur, it is at first moist but gradually becomes dry, and as the moisture leaves it its color changes to brown and sometimes to black with a depression in the centre. While dry it cracks considerably and in some cases bleeds. The patient is some-

times unable to protrude it beyond the teeth. The voice is at this time very mumbling.

The patient complains of considerable sickness from the commencement, and some vomit occasionally; in others the stomach contracts forcibly once or twice, throwing up a considerable quantity of fluid without being much sick. This fluid is mostly the drinks that have been taken, occasionally, however, it is green bile. This latter I consider a very dangerous symptom. The discharges from the bowels are of a muddy brown, sometimes of a green color, and gencrally very watery. Towards the last the liver throws out a quantity of pitchy, black bile. The urine is highly colored. There is but little sweating in this form at first, and it is confined entirely to the face and breast, but about the seventh day or ninth it becomes more general. The symptoms which denote a fatal termination are subsultus tendinum—the patient's endeavoring to rise from the bed without assigning any reason for it; incoherent speech; double vision or the loss of vision; involuntary discharges of a dark pitchy matter; laborious breathing, especially in making an inspiration; cold, clammy sweat. Death supervenes usually between the seventh and eleventh days, sometimes not until the 21st.

This fever, in its commencement, is of the inflammatory diathesis, but if not broken up before the seventh or occasionally the ninth day, it assumes a typhoid character, which is attended with a diarrhœa, a peculiar irritable excitement, great restlessness, the patient showing signs of considerable distress, but at the same time professing to feel well, much better when interrogated, small, feeble but frequent pulse, a tremulous tongue, great somnolency, &c.

This form can be so easily distinguished from either of the other two by the diagnoses given in treating of them, and by its own enumerated symptoms as to render a particular diagnostic essay unnecessary.

There are three grand indications of cure: First, to allay the arterial and febrile excitement. Second, to open the portal system where it is locked, and to change the irrtiated state

of secretion generally; and thirdly, to prevent its running into a typhoid state. When there is a hard pulse, pain in the head, and a torpid state of the bowels, general blood-letting is indispensable, and should be resorted to in the height of the paroxysm, to such an extent as to overcome entirely the hardness of the pulse, and afterwards repeated at any time when the hardness returns. Great care however is necessary, and a close observation of its effects. Much bleeding, or bleeding in persons of weak, relaxed habits, or on any other pulse than a hard one, produces an irritable state of excitement that favors a typhoid tendency. A teaspoonful of spts. nitri dul. should be given in water, in adult cases, every two hours, during the exacerbation, when the stomach will bear it. During the remission, if there should be any, two teaspoonsful of spts. mindereri may be given every two hours until the exacerbation, when the nitre should be resumed. The surface should be regularly sponged off every few minutes with warm vinegar and water. The head should be frequently wet with cold water, when there is considerable pain with heat in it; when the pain is unattended with great heat, spts. camphor should be used instead of water. Also when there is on the surface generally an acrid or pungent heat, cold water may be used as a wash instead of the warm vinegar and water, if it does not produce a sensation of chilliness. For a drink, soda water may be allowed and cream of tartar water where the bowels are not too active.

To fulfil the second grand indication, we depend on calomel. A small dose of it, say 8 grs., taken at bed time and worked off next day with castor oil, and followed up two or three times if necessary, will probably in most cases break up an attack. When the attack is sudden or the fever completely formed before the physician is called, the doses should be larger, say 15 grs., and followed if necessary by castor oil or rhubarb. Should the operations be watery, stop them immediately by laudanum or opium in substance, and repeat the calomel. And where the operations are consistent, the bowels should be permitted to rest for six hours before the repeti-

tion. This course should be unremittingly followed till the secretions in general, and the alvine in particular, become healthy, or the fever is broken. Where there is a bilious purging from the commencement or where it occurs at any time during the course of the fever, I am in the habit of giving, in the place of calomel alone, the following powder: cal. 5 grs., opii. ½ gr., ipecac. ½ gr. or 1 gr., when the stomach will bear it, every three hours until four are taken, following them in four hours after the last with castor oil if necessary, and restraining the operations with laudanum if they should be too large or watery. This course should be repeated every 24 hours till the desired effect is produced.

When this course does not effect a cure and the fever threatens to assume the typhoid type, to fulfil the third indication, a sinapism should be applied to the spine once every 24 hours, to remain long enough each time to make the skin very red. This will stimulate the ganglionic nerves supplying the liver, where they are much oppressed by disease. This application is necessary where the discharges from the bowels are of a dark muddy color and watery. Without it, the internal remedies fail of having their desired effect. Should the fever be of the typhoid type when the physician is called, or should it appear to be assuming that type under his hands, if the tongue is moist enough to allow it, a powder should be given, composed of 3 grs. quinine and 4 grs. calomel, every four hours, until four are taken. They should be followed by oil about five hours after the last powder. This course should be repeated every 36 hours until the fever is broken or the gums are affected by the calomel, when it should be omitted, while the quinine may, if necessary, be continued. I have feared to give the quinine where the tongue is of a dry red colour or black, nor do I recollect seeing it recommended in such cases by any author. In its stead I give carbo ligni, finely pulverized, in 20 gr. doses every four hours, as long as it does not produce unpleasant sensations at the stomach. And every 24 hours, give a course of the camphorated powders, used in the treatment of the congestive variety, at inter-

vals of three hours, following each course by a cathartic if necessary, until the tongue becomes moist and the secretions free. In this stage of the fever stimulants frequently become necessary; and Port or good Madeira wine seems to answer best. They should be used in thosə cases only where the vital powers of the system rapidly sink. Wine given at short intervals, assisted by stimulating frictions of the surface, will keep up an action long enough to permit the other medicines to affect the secretions in cases which would otherwise prove fatal.

At any stage after the inflammatory diathesis is subdued, when there is a dry tongue of a brown or bright red color, attended with bilious purging, blisters should be applied to the bowels, and to the back of the head and to the ankles when the head is much affected.

Whenever the symptoms of a slight chill introduce such paroxysm, should the tongue be moist, the chill may be broken up by the use of calomel and quinine at intervals of three hours before it is expected. Quinine may be used separately if the purging forbid the use of calomel.

After the secretions become free, and a remission or intermission is fairly established, tonics should be freely used to complete the cure.

And, in conclusion, as tartar emetic might be mentioned as a remedy in this form of fever, I will state the result of my experience respecting it in few words. In the commencement of this form, when bilious matter is frequently vomited, and the presence of bile in the stomach causes a constant sickness, a gentle emetic of tartar is very serviceable, perhaps indispensable. But, given in every case indiscriminately, it produces an irritable state of excitement, which increases a typhoid tendency. Given in either of the preceding varieties, the effects are almost invariably fatal.

November, 1841.

ART. VII.—*Remarks on a Review of an Essay on Trembles, Milk-sickness, &c.* By JOHN S. SEATON, M. D.

It will be recollected by the readers of this Journal, that the November No. contains a review of a small pamphlet published by me during the past summer, on the cause of "Milk-sickness, Trembles, &c." If Dr. Drake, the author of that critique, had done justice to my views therein expressed, or if all who read the Journal had an opportunity of reading my pamphlet likewise, I would feel willing to let the whole pass without publicly noticing the criticism. But neither being the case, I feel myself called on to reply to Dr. Drake, and defend my expressed proposition.

I have said that the critic failed to mete out justice to the views contained in the pamphlet on the cause of the above named diseases, and I may add, as at least strong negative proof in support of this general charge, that the verdict of every man, professional and non-professional, with whom I have conversed, and who had read both the pamphlet and the review, is in full and entire coincidence with this declaration.

But a general charge cannot be sustained without specific items, and for this reason I will particularize a few out of many points in the criticism that are at variance with justice, both to myself and to the subject, in order to establish what I have said.

And 1. Dr. Drake did not disclose the reasons that I gave, for not having subjected the water of the different springs, etc., that I visited, to chemical analysis.

2. Dr. D. conveys the idea, that I assume the ground that *arsenical iron pyrites* is the universal cause of the disease, an opinion not only not advanced by me, but expressly denied on page 41 of the pamphlet. The reason why I spoke so freely and fully of the Iron, and especially of the sulphuret or pyrites, was because I found it in such great abundance in those sections, and also because of the ready and rapid spon-

taneous decomposition of the pyrites containing the arsenic.

3. The Professor at least intimated very plainly, that I had declared the "Milk-sickness" to be common to *all* sand or free-stone localities, which is not the fact, as he himself will see, if he will but trouble himself enough to read my pamphlet attentively, and give to my expressions their legitimate import or meaning. On page 10, I argued and averred, that the "*pure* and *thorough* limestone regions were exempt," while the regions containing the *impure* orders of lime-stone, mixed with sand-stone, or the almost entire sand-stone formation, were the ones in which the diseases abound to the greatest extent. This, however, neither affirms nor implies, that the diseases in question are present in *all* such localities in the South and West, and to read it in such sense, does violence both to my language and my meaning. But in the regions where those diseases prevail, I again assert, (Dr. D.'s assertions to the contrary, nevertheless,) that such is their geological constitution; while in the exclusive or entirely *pure* limestone lands, not containing beds of diluvial deposition, or any of the enumerated materials characteristic of the "coal measure," the diseases in question never have occurred, and never will occur, either *endemically*, or *sporadically*, unless they be transported. In such, for instance, as that portion of Jefferson County above Louisville, known as the "Bear-Grass settlement,' a goodly portion of Shelby, Fayette, and Bourbon Counties in Kentucky, and in the *pure blue* limestone around Cincinnati, Ohio, with innumerable other localities which might be mentioned, those diseases never did, and never will, appear. We might as reasonably, and with about as fair a chance of success, expect to find a gold mine in the public streets of Louisville or Cincinnati, or mountains of snow, and icebergs, in the centre of the Torrid Zone, as to expect to find "Milk-sickness" in such situations.

But 4. The most astonishing feature in the "Criticism" is contained in the paragraph in which Dr. Drake denies the above premise in the arsenical hypothesis, and endeavors to

annihilate by the fiat of his own word, the geological distinctions laid down in the pamphlet.

With due and ample respect and regard for Dr. Drake's erudite attainments, and a prudent reverence for his respectable (even venerable) age, candor, truth, justice, and the subject in hand, compel me to say, that by this open and unqualified denial, and by referring to the different rivers in Kentucky, Ohio, and Indiana, which he has done, he has proved himself to be, either utterly ignorant of the subject on which he wrote, or totally regardless of, and recreant to the truth. I am prepared to say, and to establish, (if indeed many of as good men as live in Kentucky dare be believed,) that *sandstone* exists in abundance on the Kentucky river, at many points, but especially a short distance below Boonsborough, and at or near the mouth of Eagle creek, below Frankfort, and with it also is found the spurious or impure limestone. The same thing is true of many places on the Licking river, while abundance of good pure limestone exists in many portions on each river

In relation to "all the Western tributaries of the Scioto river, in Ohio," I ask no better proof against the Professor's allegation in his review, than is to be found in the "Memoir on Milksickness," from his own pen in March last. Why did Dr. Drake in so short a time contradict what he said under the "Caption" on page 6th of the "Memoir"? Which statement is true, himself being umpire? In many places on the Miamis, the sandstone is abundant, being imbedded in a sandy soil, which is underlaid by a deep bed of diluvium, consisting of pebbles, sand, gravel, and clay, etc. This I state upon the authority of three citizens of this county, of unimpeachable veracity, and whose names I am at liberty to give, if necessary. But we will examine the stony formation in the bottoms of those rivers, and see how far it comports with the premise in the "Arsenical Hypothesis." Beginning at Columbus on the Scioto, in Franklin County, we find the river flowing over a stratum of "Cliff limestone" which is very impure, because of the magnesia, alumina, sand, and the abun-

dance of sulphur and iron in the form of *pyrites* contained in it. At Chillicothe, in Ross County, it traverses the *black shale*, which overlays the "cliff limestone," and which also contains the pyrites in abundance. At Waverly, in Pike County, it runs on the fine grained sandstone, (which is remarkable because of the quantity of sulphur and iron it contains), and at its mouth is found on the coarse sandstone, which constitutes the base of the coal formation.

The Miami rivers, above Clifton on the one side and Troy on the other, are flowing over the "cliff limestone," and in that region the "milk-sickness" abounds; but below those towns the rivers flow over the *pure blue limestone*, and there the disease is unknown. At Brookville, on White-water, in Indiana, the blue limestone occurs; but it is there covered to the depth of many feet by a thick bed of diluvial or transported materials, consisting of clay, sand, gravel, and an immensity of the fragments of "cliff limestone."

In Preble county, situated on the Western border of Ohio, and through which several of the Western tributaries of the greater Miami pass, the "milk-sickness" prevails where the "cliff limestone" is covered to the depth of 40 feet, by the same kind of diluvium, &c. For the accuracy of the above statements, see "Geological report on the State of Ohio."

Such stony formation under-laying the streams which bound and pass through the "Virginia military district," such soil and timber growth, as is described by Dr. Drake, at the top, and growing on the surface of the plateaus or table lands, at once assure us, in the absence of all other testimony, of the presence of *inferior* limestone, sandstone, etc., etc., with more or less mineral substances.

If the latter be not true, then it is not a fact that geology and botany have a reciprocal relation. But we have other and ample testimony, and that, too, of the most "indubitable" character, equally as "*indubitable*" as the testimony upon which Dr. D. relies so confidently, in support of the *fact*, relative to the *fate* of the herd of "cattle," a part of which were pastured on *meadowed* land, while the others were kept upon an adjoining "wood land," &c.

But the professor assures us that the clearing and culture of the land has proved to be an *infallible preventive* in the State of *Ohio*, and adds: "We know of no fact going to prove that the same process would not be effectual every where." It may be true that Dr. D. *knows* of no fact going to prove the contrary, for I apprehend he has not tested the matter by observing for himself, and as nothing can properly be denominated *knowledge*, that has not been conveyed to the mind by one or more of the five senses. But I think a sufficiency of *facts* of at least a *veritable* aspect have been presented, contradictory of the Doctor's assumption, to induce *faith* in him of an opposite kind, if he were not *indeed* a thorough sceptic on the subject. If he will only turn to page 90 in the first number of the ninth volume of "Transylvania Journal of Medicine" he will see that his assertion relative to the *entire* efficiency of clearing and tilling the land in Ohio, as a means of prevention, was contradicted by Dr. McAnelly, of Ky., five years before its promulgation; and on page 87 of the same number he will find it again contradicted by Dr. Shelton, of Alabama, relative to *cultivated* land in Tennessee and Indiana. And if the settlers in the places to be named, can be accredited, it has not been sufficient on Beaver creek and Palloca, Indiana, in a small section below Hardinsburg, in Breckinridge, and on Panther creek, in Davis county, Ky., &c.

It may be true that too much attention has been bestowed on the cause of the *diseases*, but it is yet as interesting and of as much importance to the profession, as well as the people, as it was in *March last*, and surely it merits a much graver consideration than does another disease common to cattle, and which finds place occasionally in our Western periodicals, the *Murrain*.

In conclusion, I will add that since the publication of my pamphlet, I have possessed myself of many valuable facts by experimenting and otherwise, and while the matter is in hand, and the investigation pending, I am willing to meet any man in the west, in any periodical, and defend the "*Arsenical* Hypothesis," against the whole vegetable kingdom. I believe

the arsenic is contained in spring water, in some instances, in *licks* in others, and is often exhaled from the earth in dry weather, and settles on the herbage; perhaps it rises in the form of *Arsenuretted Hydrogen*, is decomposed by the air, and the arsenic thrown down, &c. But the facts are what we want; and will any opponent of the *Arsenical Hypothesis* join issue on equal terms and oppose it before the reading public?

Dec. 30, 1841.

ART. VIII.—*Singular Phenomena accompanying Menstruation and Uterine Hemorrhage.* By Dr. J. E. SANDS, of Wilson county, Tennessee.

Mrs. B., a native of the State of Georgia, is 56 years old, and has 8 children. She is quite fleshy; has dark eyes, red hair, and a thin, tender, white skin; is of a very lively, cheerful disposition; labors hard and takes a great deal of exercise.

On her left side, commencing about the second false rib, is a line three-fourths of an inch wide which passes directly upwards a little external to the mamma, and stops two inches from the clavicle. Here it divides into three branches of about half its own width; the outer branch, three inches long, passes obliquely upwards and outwards nearly to the scapulo—humeral articulation, where it terminates in a prominence about the size of a half-ounce bullet; the inner one, of the same length, runs obliquely upwards and inwards almost to the junction of the clavicle and sternum, and terminates like the first; the third branch, an inch and a half long, pursues an intermediate course and terminates like the others.

She began to menstruate at the age of 12, and continued to do so regularly until she was 25, when she married; three months afterwards conception took place, and the catamenial discharge ceased. At the usual period she gave birth to a

son; two weeks afterwards the menses made their appearance again, and recurred at regular intervals until she was six months advanced in her next pregnancy. The same thing attended all her subsequent pregnancies. At the age of 49 the menses ceased entirely, after which she had no flow of any kind from the uterus until last December, when she suffered with a violent hemorrhage from that organ.

At every menstrual period, from the time menstruation began until it ceased, a fluid resembling the catamenial discharge in all its sensible qualities flowed from the mark or lines described above; the discharge from this part observed precisely all the changes of that from the uterus.

From the birth of her last child, which was in her 38th year, till the final cessation of the menses, she was subject to uterine hemorrhage, and the flow from the side was in direct proportion to that from the uterus, being profuse when the latter was profuse, and ceasing when it ceased. A similar discharge accompanied her last attack of hemorrhage in December.

The skin on these marks or lines is slightly elevated, of a dark red color, assuming somewhat the appearance of an aneurismal tumor. The discharge, to use her own expression, "comes out like the perspiration through the skin." No perspiration is ever discovered on these marks, although she generally perspires freely.

May, 1841.

Selections from American and Foreign Journals.

Rheumatism of the Skin.—The *Archives Generales*, for September, just received, contains a paper on Rheumatism of the Skin, by J. H. S. Bearr, of which we shall present a short summary. After some preliminary remarks on neuralgia of the skin, called, by M. Provoy, dermalgia, he remarks that, in some cases, this neuralgia is evidently rheumatismal, occurring in rheumatic patients, and partaking of other of the characteristics of rheumatic pain. Rheumatism of the skin occurs oftener in men than in women—usually in adults. It is produced by any of the causes of Rheumatism, particularly by exposure to cold. It may be seated in any part of the skin, but is most common on the scalp and upon the lower extremities. The pain is of two kinds—one fixed, the other intermittent; the former is usually slight, the latter more severe. The fixed pain is much augmented by touching the skin even very slightly, and in this way, too, the flying pains, as they are called, may be produced. The skin is not changed in appearance, be the pain ever so severe; sometimes it is dry, sometimes very moist. The duration of the complaint is from two to fourteeen days; the termination, like the accession, is gradual. It frequently returns and varies its point of attack, two distant parts of the skin are, however, very rarely affected at the same time. Rheumatism of the skin often alternates with that of the muscles, the ligaments, or the nerves, but it does not often complicate them. M. B. has known fever to accompany this disease in three cases, which he gives. We shall translate one, abridging it considerably.

Case.—A young law student was exposed to a cold rain, and remained in wet clothes for some time. Next morning I found him with fever, thirst, loss of appetite, headache and continued chills; the skin was dry and painful through its whole

extent, particularly over the chest and extremities, the pain was lancinating, and was augmented by the slightest touch—even by the chafing of the bed clothes. This pain might have been attributed to rheumatism of the superficial muscles, but the motion of the limb was not painful. except when the skin was brought in contact with something.

The patient was put on the use of demulcents, and the symptoms disappeared in five days.

Rheumatism of the skin may be confounded with that of the muscles, the nerves, or the fibrous tissue of the joints; the diagnostic symptoms are that the pain is superficial, that it intermits, that it is augmented by the slightest pressure, even brushing the skin with the feather of a quill, or touching the hairs by which the affected part may be covered, and that it is not aggravated by motion of the limb. The prognosis is favorable and the treatment the same as that of other rheumatic inflammations.—*N. Y. Med. Gaz.*

Poisoning from the use of a Tobacco Enema.—A strong man, aged 55, who had for some time labored under dysuria, from enlarged prostate, and more recently had suffered from ascarides in the rectum, received an enema, made by infusing 12 grains of tobacco in 12 oz. of water. Seven or eight minutes afterwards he appeared in a slight stupor, had headache, and unusual paleness of the face. He complained of pain in the belly; his answers to questions were not clear. Two purgative injections were given, sinapisms applied, stimulants given and a small quantity of blood (three pallettes) taken. The paleness increased, coma and convulsions followed; extreme prostration, and finally death closed the scene.—*Rev. Med.*

Remarks.—We are induced to copy this case, that we may impress, if possible, our readers with our own conviction of the extreme danger from tobacco enemata. Early in professional life, a case came to our knowledge, which has ever served to keep us from this remedy. A young sailor, healthy and robust, was admitted into the Pennsylvania Hospital with strangulated hernia; the taxis, &c., were tried in vain. An operation was resolved on; somebody suggested a tobacco enema; it was tried, and in less than two hours the poor fellow died, prostrated, poisoned by this unlucky remedy. A method of

using this remedy per anum, which was lately resorted to by our friend, Dr. Jno. R. McComb, may be attended with less risk than the enemeta. He enveloped a dose of tobacco in a fine linen rag, put it up the anus as a suppository, and as soon as the nausea was produced, removed the whole. This is probably an improvement, but even thus we should resort to tobacco only at the last extremity and then with fear and trembling.—*N. Y. Med Gaz.*

Conium and Opium.—The following comparative view of the respective effects of conium and opium, is from a paper in the Med. Bot. Trans., vol. 1. pt. 4, by Mr. Judd:

Conium.	Opium.
Brain unnaturally free from blood; ventricles almost dry.	Brain gorged with blood; ventricles full of serum.
Lungs empty of blood.	Lungs so full of blood, that it runs out in a stream on their being cut.
Villous coat of the stomach and esophagus, white.	Villous coat and esophagus red.
Right side of the heart gorged with blood; left side empty.	The heart's cavities all contain blood.
Heart dead to stimuli.	Unknown whether so or not.
Intestines active and white.	Intestines inactive, red and inflamed.
Blood dark and fluid in both veins and arteries.	Blood at times, but not always, fluid.
Death of the heart.	Death, as I conclude from the other symptoms, of the brain.

From his comparative experiments with the two drugs, Mr. J. doubts whether conium ever produces sleep, as opium does, by rendering the vessels of the brain turgid. From the power displayed in his experiments by conium, in lessening the quantity of blood sent to the brain and spinal cord, and also in lessening the force of the heart's action, Mr. J. concludes that it may be a valuable remedy in hypertrophy of the heart, in phrenitis and in inflammation of the spinal marrow. The experiment is worth trying.—*N. Y. Med. Gaz.*

Report on the Treatment of Burns in the Hospital of La Charite. Translated and abridged, for the Medical Gazette, from L'Experience, of 30th Sept., 1841.

Burns, admitted into the Hospital of La Charite, in the wards of M. Velpeau, are generally arranged, according to their depth, after the classification of Dupuytren, which comprises six varieties, namely, burns of the first degree, or those attended with an erythematous blush of the skin; burns of the second degree, or those in which the cuticle is raised in blisters; burns of the third degree, or those in which the true skin is involved; burns of the fourth degree, which reach the subcutaneous tissue; burns of the fifth degree, in which the soft parts are deeply involved, and burns of the sixth degree, in which the whole part is destroyed.

M. Velpeau resorts to three principal methods of treating these several varieties. If the burn is of the first degree, and not extensive, simple refrigerants, or the local discutients usually employed, will be sufficient. But Baynton's method of dressing the parts with straps of diachylon plaster, will almost always arrest the evil; the same treatment is applicable to burns of the second and even of the third degree. A single dressing is sufficient for burns of the first degree, and it rarely happens that the cure is not found to be complete, on raising the straps at the end of the third or fourth day. In burns of the second degree, M. Velpeau first raises the epidermis from the blisters, and carefully cleanses the surface beneath, with a linen cloth; he then applies the straps, and usually two or three such dressings will bring about desiccation and cicatrization of the whole surface.

At La Charite, during this year, burns of this variety, which covered almost the whole length of the fore-arm, have been cured in six or seven days, by two dressings only. If the burn is of the third degree, a greater number of dressings will be required, and the cure will rarely be effected in less than fourteen or fifteen days, because the eschars must slough off from the burnt surface before cicatrization can take place.

This very simple method of dressing requires, however, some care; it is not proper, when the affected part is the seat of a decided inflammatory swelling, nor when the burn extends over a large surface. Moreover, it cannot be applied to the face, the neck, the thorax, the abdomen, nor to the extremities, where they are united to the trunk. Hence it is to be used upon the arm, the fore-arm, the hand, the thigh, the leg,

and the foot. For other parts, particularly the face, M. Velpeau prefers the liniment composed of equal parts of lime-water and olive-oil, well-beaten together; this produces very happy results, and may be applied four or five times a day, with the feather of a quill. If the burn is on the face, it is not to be covered with dressings, except that it is well to place over it a sheet of scorched paper, after each application of the liniment.

Of the cases which have been treated at La Charite during the summer, the two following may be cited:

A man employed in the privies, set fire to the gas in one of the places which he was cleaning, and the whole of his face, the fore part of his neck, and both his hands, were burnt in the first, second, and third degrees. He was brought into La Charite the day after the accident, with the appearance of having been broiled, and the only application resorted to was the immediate use of the liniment above referred to; the result was, that at the end of nine days after the accident, he was able to go out and attend to his business, his face and arms being entirely free from purulent secretion or excoriation.

Case II.—A young girl was severely scalded over the whole face, the forehead, the supra-hyoideal region, and the greater part of both hands, and was admitted into La Charite on the third day, at which time there was erysipelatous swelling and decided reaction over the whole extent of the injured surface. The burn was of the first degree at some points, of the second in others, and of the third in spots over the malar-bones. The parts had been dressed, previous to her admission, with the lead ointment, which was suspended, and the ointment of oil and lime-water was immediately applied, and the pain, heat and swelling began to subside at once; the burnt surfaces diminished by degrees, and on the eighth day the cure was completed.

This is the treatment which the Professor of La Charite recommends as particularly applicable to burns of the three first degrees, when they occupy an extensive surface, or occur in parts difficult to dress, or which are habitually exposed to the air. It is hardly necessary to add, that these two methods of dressing are of little value in burns attended with deep eschars, for in these suppuration and sloughing of the eschars must take place, after which the proper means must be taken to produce cicatrization of the ulcers.

In the treatment of extensive burns of the body and limbs, M. Velpeau has tested the comparative merits of cotton, cold water, and chlorine water, and has come to the conclusion

that cotton is not more efficacious than charpie (lint); that cold water produces much the same effects as the chlorine solution: and that simple salt water, so long a popular remedy, is really the best application.

It is necessary to add, that burns which extend over at least half the body, and in which the whole thickness of the skin is involved, rarely fail to destroy the patient during the first two or three days, or when re-action comes on, or else during the process of suppuration, and that in these cases no treatment offers a probable chance of success; but no cases of this kind have occurred among the 18, cited by Mr. Velpeau, in his report of this year.

Dr. Staats, of Albany, has had such surprising success in the treatment of gonorrhœa, by the extract of cicuta, that he has addressed the Medical Society on the subject. In giving it to a patient with neuralgia, who happened also to have the other complaint, he was relieved of both by four grains every four hours till the system was under its influence. Since, he has cured several cases, giving the same dose once in four hours till dizziness was produced, to be followed by a dose of Epsom salts.—*Bost. Med. Jour.*

M. Levy, of the Military Hospital, Val de Grace, Paris, commends very highly the use of quinine in the dropsy which follows intermittent fever, and which generally depends on enlarged spleen. M. Levy believes that the spleen is often engorged before the first paroxysm of fever, and he says that close enquiry will generally satisfy us that there is pain and tenderness in the left hypochondriac region, and that the enlarged spleen can frequently be felt or detected by means of percussion. Whenever this is the case, when there is pain, tenderness, or manifest enlargement of the spleen, he advises cupping to the part, repeated from time to time, till these symptoms disappear. Then he gives the quinine. If dropsy supervene after the fever is broken, whether it be ascites, anasarca, or both, he gives the quinine in moderate doses and perseveringly. This will generally remove the en-

gorgement and cause the absorption of the fluid. Mr. L. gives two cases to illustrate these views. His opinions were new to us, though published some time ago. We commend them to the notice of our country readers, under whose care many cases of intermittent will come at this season. In particular would we advise the early and careful examination of the region of the spleen, both by touch and by percussion. This, by the way, is one of the cases in which the auscultory percussion, as first practised by our friends, Drs. Clark and Camman, of this city, and of which a notice appeared in the 4th No. of the N. Y. Journal of Medicine and Surgery, would be useful. The spleen being carefully examined, if there is any pain, tenderness, or enlargement, let the part be freely and frequently cupped till the symptoms are relieved. Then quinine will be proper.

As to the use of quinine in dropsy, it is contrary to established rule, and if tried, it should always be done cautiously. A cautious trial, the authority of M. Levy, whose experience as a Military Surgeon qualifies him to speak pretty confidently, would justify.—*New York Medical Gazette.*

On the Condition of the Nails in Fractured Limbs.—Dr. Pitschaft mentions, as a remarkable fact, that the nails do not grow during the union of a fracture, and that the commencement of growth in them is proof that the fracture has united. Dr. Lesler is mentioned as the first who ever observed this. Does this arrest of growth depend merely on the fracture of the limb, or is it, as the editor of the British and Foreign Review suggests, but indirectly connected with the fracture, depending on the well known principle, that the growth of the various horny tissues depends on the amount of waste to which they are exposed. The subject should be investigated.—*New York Medical Gazette.*

Extract of Belladonna in Paraphimosis.—A child, three years and a half old, had a severe paraphimosis; the glans red, swollen, and tender; the prepuce strongly drawn back, forming a thick and apparently adherent ring, the constriction of which completely stopped the circulation. This state had lasted eight days, and the sufferings were extreme. Reduction being impossible, leeches to the perineum and hypogas-

trium, cooling drinks, emollient enemata, cataplasms, lotions and hip baths were all tried, but with little good effect. All the symptoms were aggravated, the glans became bluish, and gangrene was threatened, when M. Mignot employed frictions round the glans with an unguent, composed of thirty parts of simple cerate and twelve of extract of belladonna. Under the influence of this remedy, the constriction relaxed, the tissues resumed their normal appearance; no loss of substance or suppuration followng.

The second patient had acute balanitis following gonorrhœa; the paraphimosis was severe. The patient would not submit to the operation; the belladonna was applied with complete success. It was given with the like effect in a case of paraphimosis, accompanied by chancres and sympathetic bubo. In three days the cure was complete.—*Brit. and For. Med. Rev.*

THE WESTERN JOURNAL

Vol. V.—No. I

LOUISVILLE, JANUARY 1, 1842.

EDITORIAL DEPARTMENT.

After presenting to our readers the compliments of the season, and wishing for each his complement of holy-day enjoyments (none of course being unhallowed) with greater success in acquiring and curing patients throughout the coming than he had in the departing year; after all these gratuitous expressions of kindness to them, we beg leave to add for their further gratification, that, by our request, the publishers of the Journal have engaged, as assistant and junior editor, our young friend, T. W. Colescott, M. D., already advantageously known to our readers, as a translator from the French of some of the valuable foreign articles published by us. It will be the special duty of Dr. C. to edit (we had almost said correct) and fit for publication, such MSS. as have been thrown off by their authors so hastily, as to require some modification. He will likewise be charged with the supervision of the press, and with the preparation of such analytical reviews and bibliographical notices, as will supply our felt and admitted, but unavoidable deficiencies.

STATE MEDICAL SOCIETY OF KENUTCKY.

We beg leave to remind our Kentucky readers of the meeting of this society on the 12th inst at Frankfort. Being the first, it should be well attended and enriched with valuable contributions. If such should not be forthcoming, the meeting will be to little purpose.

D.

LITHOTOMY.

Why is it that so many children of the West have urinary calculi? The four latter operations for lithotomy which we have had an opportunity of witnessing, were on small boys. The last was under four years of age, and had shown signs of calculus for 10 months. The operation was performed by Professor Gross, before the Medical Class, in the Amphitheatre of the Louisville Hospital. The calculus weighed half an ounce, and belonged to the mulberry species. It is nine days since the operation, and the little patient is doing well.

D.

PHYSIOLOGICAL TEMPERANCE SOCIETY.

A society has been organized in the Medical Institute of Louisville, under the above title. Its object is to investigate the whole subject of alcoholic intemperance, together with the abuse of other stimulants and narcotics. As far as we know, over stimulation has not before been made a *speciality*, though from its prevalence and desolating effects, it well deserves such consideration. The society, which was organized as late as the 23d ult., already embraces more than a hundred members. Its meetings are semi-monthly; from the first of November to the first of March, in the hall of the Institute; where papers will be read and discussions carried on, relative to the causes, pathological effects and therapeutic means, both prophylactic and curative, of intemperate stimulation with intoxicating beverages and other excitants. The society respectfully invites communications on all the topics lying within its purview; and especially autopsic reports on those who have died from intemperance. The officers for the present year are *President*, Dr. Daniel Drake; *Vice-Presidents*, Dr. Th. J. Kennedy, of Tenn., Mr. C. J. Clark, of Ala., Mr. H. C. Holmes, of Mi., and Mr. E. R. Roe, of Ia.; *Secretary*, Mr. T. Bohannan; and *Treasurer*, Mr. J. F. Bull, both of Louisville.

D.

THE ALLEGED DISCHARGE OF HAIRS FROM THE HAND.

The Lexington papers announce that Miss Penelope Stout's case is a hoax. The young Miss was detected sticking the hairs and bristles under the thumb nail.

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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

FEBRUARY, 1842.

Art. I.—*What shall we do with our Insane?* By Edward Jarvis, M. D., of Louisville, Kentucky.

What shall we do with our Insane? This is a question that must come home to all of us, whether physicians or citizens, and sometimes appeal with fearful earnestness to our hearts and understandings for answer. And are we ready to give it? Every one of us is liable to find insanity, in some form or other, in his own family. Every physician may be called, at any time, to see it among his friends. His advice is then pressingly asked—What shall be done with the patient suffering from moral or intellectual derangement?

This is a question—not, indeed, of life or death—for insanity is not a dangerous disease; comparatively few need die of it. But it is a question of future soundness of reason and of correct feelings, or of permanent insanity. And whether our patients or our friends shall be brought back to mental life and all its enjoyments, to usefulness, society, and to happi-

ness; or whether the incubus of lunacy shall weigh forever upon their understandings, their feelings and affections be enchained or perverted, and they become a burden upon their families, a terror to society, or perhaps, sinking into fatuity, a mockery to the unthinking and the heartless; which of these shall happen, depends upon us, and our answer to the question—What shall be done with the insane?

Nor is this a rare question. It has been asked, or it ought to be asked, frequently; for there were, at the last national census, taken in the year 1840, eight hundred and thirty-three lunatics and idiots in Kentucky; eight hundred and fifty-one in Tennesee; five hundred and sixty-eight in Indiana; two hundred and twenty-seven in Illinois; two hundred and seventy-eight in Missouri, and thirteen hundred and sixty in Ohio.* And their claims press, with an irresistible importunity, upon our professional skill and upon our humanity, to tell them what they shall do. And though our fathers and we, hitherto, have not told them, and these insane patients have got no relief, and a large portion of them have become

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* Statement of the number of Insane in the Western states, taken from the last national census, and how supported.

	Whites.		*Colored.*				
	Public	Private	Private	Public	Total	Populat'n	Proportion of insane to population
Mississippi	14	102	66	16	198	375,651	1 in 1,892
Louisiana	8	45	37	8	98	351,176	1 " 3,592
Tennesee	103	596	124	28	851	829,210	1 " 974
Kentucky	276	406	110	41	833	777,397	1 " 934
Ohio	363	832	62	103	1360	1,519,467	1 " 1,117
Indiana	110	383	46	29	568	683,314	1 " 1,203
Illinois	25	162	32	8	227	474,404	1 " 2,089
Missouri	44	165	52	17	278	381,102	1 " 1,370
Arkansas	3	14	6	5	28	95,642	1 " 3,415
	946	2705	535	255	4441	5,487,363	1 " 1,235

The average for all the United States is one to 990.

incurable maniacs, or have sunk into hopeless imbecility, yet we can no longer be silent; we must tell, what shall be done with the four thousand four hundred and forty-one lunatics and idiots, that live in the vallies of the Ohio and the Mississippi. The present state of medical science will not suffer these any longer to be neglected, and still less will it permit, that those, who hereafter shall become insane, shall have their disease permanently fixed upon them.

What then can be done? What can we do for them? As regards the future, these patients may well be divided into the hopeless and hopeful. In the former class are included idiots from birth, and, also, such as have become idiotic in the progress of the disease, epileptics, and paralytics. But although these may not hope for restoration to health, yet most of them may be improved and rendered more comfortable to themselves, and tolerable in society.

To the other class belong all other cases—old and recent. For these, there are three grades of hope; and according to the results of the treatment of these must they ultimately be classed, though not now.

1st. Those who may be completely restored to health.

2d. Those, who, though they may never enjoy perfect sanity, yet may be so far improved that they can live peaceably and quietly among their friends, without interfering with the safety or comfort of society.

3d. Those who can obtain neither of the former conditions, but may, under the influence and restraints of a hospital government, have their delusions so far modified, and their agitated feelings so soothed, that they may enjoy a calm and contented existence in an asylum, though they could not bear the irritations of the world, without distress or raving madness.

Before the insane fall into either of these classes, they must aim at the first; and if they fail there, they fall successively into the second, and even the third class, by the trial of the remedial measures. Few indeed are the lunatics, who may not be brought into one or the other of these classes; and if taken very early in the disease, and proper measures

be faithfully used, few will be found who may not be put in the first class, as we shall hereafter show.

Our first object is to cure the lunatic. If this fails, our second object is to improve him, so that he may live comfortably at home. And lastly, in default of both these, our third object is, to find a comfortable resting place for him. How shall we obtain these?

Shall we retain the insane at their homes, and apply such remedies as we have, and such restraints as their excitements and our fears seem to demand? We have been trying this plan for many years in Kentucky and the other Western states, and have found, in most cases, no better result than permanent insanity, sometimes uncontrollable frenzy, and even dangerous madness, and sometimes irretrievable imbecility. And for all purposes of restoration to health, of improvement or comfort for the maniac, of satisfaction to friends, or even of public or private economy, the old system of keeping lunatics at their homes, in charge of committees or of their families, wandering freely abroad or confined in strong places, has been demonstrated to be worthless, in almost every town and neighborhood, and, without doubt, within the observation of every physician.

The great number of old cases, that were once recent, but have been suffered to become chronic, and probably permanent; the many imbecile that were once rational, and the uncontrollably excited maniacs, are melancholy proofs of how vain were our hopes that the disease might wear itself away, and how futile were all our attempts to cure it with any means and appliances of a domestic nature.

We must, then, try some other plan. Home is not the place for the cure of the insane. The circumstances and associations of home too often aggravate and perpetuate the mental disorder, rather than soothe and relieve it. So that now all medical authorities advise the removal of the patient from the familiar scenes and associates, among which the disorder first arose and grew.

Esquirol advises, that the insane be removed from their homes, and confined, for the five following reasons:

1. For their own security, and that of their families, and for the maintenance of public order.

2. To remove them from the influence of external circumstances, which may have produced their disorder, and may be likely to protract it.

3. To overcome their resistance to curative means.

4. To subject them to a regimen appropriate to their situations.

5. To cause them to resume their intellectual habits.

The first of these reasons is sufficiently obvious, and need not be urged here. The public and the friends of the lunatics are careful enough of their own safety and of the security of the latter, to place them out of harm's way, and beyond the means of doing mischief.

A large portion of the cases of lunacy arise directly from the trials, difficulties, and misunderstandings of home; from domestic grief, from fear of poverty, and from disappointments. Some are caused by excessive labor of body or mind, from hard study or intense application to business, and from unrequited love or thwarted ambition.

All these have their origin in matters and circumstances immediately about their usual abode and haunts. These causes, which at first excited, next continue to feed the disorder. In order then to cure the disease, we must first remove the cause from the patient, or the patient from the cause. And if that cause be home or its concomitants, removal to another place of residence must be the first step toward relief.

Most cases of lunacy are aggravated by the usual and familiar scenes and persons, whatever may have been the original cause of the derangement. The insane are generally suspicious of others, or self-distrustful. The ordinary motives cease to influence their opinions or govern their actions. The usual reasons do not draw their confidence. One conceives that he cannot perform the ordinary duties, which he has hitherto done cheerfully, and nothing will induce him to at-

tempt them ; and he then is in great distress, because he has thus neglected what he knows he ought to do. Another supposes that his family are his enemies, and are seeking to injure him. Another is peculiarly irritable upon the common topics and interests of his neighborhood ; he imagines that they implicate him in wrong or danger, and flies in a passion when they are mentioned, or avoids allusion to them altogether. One has strange conceptions of his relations to his friends and the world ; he supposes himself to be a king, and therefore demands implicit obedience ; or a prophet, and expects unreserved faith in his opinions. To resist this assumed authority, to refuse this undue submission, or to withhold this groundless belief, would but aggravate the lunatic's derangement of mind, or exasperate the rage of the maniac, and is impossible for the family and friends, without increasing the disorder. At home, with no other restraints than the family and friends can usually present, the patient must have his own way; and that way, to say the least of it, is not a good one, and often it is a very bad one. All the influences of home cannot prevent this, without exciting the very perversity they attempt to repress. When Mr. Pitt put king George III., under the care of Dr. Willis, in 1789, he was treated successfully, indeed, at his own home. But Dr. Willis discharged all the servants, attendants, lords and ministers, who had been about the king before. The family were all removed, the furniture taken away, and an entirely new corps of attendants placed about the royal patient, and the palace at Kew furnished so differently, and all the paraphernalia and regimen so thoroughly changed, that it had all the seeming of a removal from home ; for indeed the home was removed from him. The king recovered ; and so might our patients, without going from their own houses, if we could metamorphose those houses, and change the attendants, as Dr. Willis did for the king. This example is good for us, so far as it shows the necessity of placing the lunatic among strange men and objects.

Georget, one of the ablest of French writers on insanity, and himself long devoted to the observation and cure of this

disease, says:* "Every physician who has been in the habit of attending to lunatics, has, without hesitation, advised the separation of such patients, in almost all cases, as the first condition and one of the principal means of cure. The insane ought to be removed from those objects, which first caused their alienation, or which might have kept it up or aggravated it; from relations and attendants whom they detest, whom they pretend to command, and whom they will not obey; from the inquisitive, who would irritate them by useless reasonings, or by ill-timed raillery. They ought to be removed from society, and placed in a habitation specially appropriated to this purpose, both for the safety of the public and for their own security."

Esquirol says: "The sensibility of the insane is perverted. They no longer have any relations with the external world, but those of a disordered and consequently painful nature. Every thing irritates them, distracts them, and excites their aversion. In constant opposition to all that surrounds them, they soon persuade themselves that persons are combined to injure them; and neither understanding what is said, nor being able to comprehend the reasonings, that are addressed to them, they misinterpret the most affectionate expressions, and the wisest counsels; they mistake the most candid, serious, and tender language, for insults, irony and provocations, and the most attentive kindness for contradictions. The regimen and the prohibitions, which are called for, by their situation, and to which their attendants wish to subject them, appear to them cruel persecutions."†

"The heart of the insane cherishes no feeling but mistrust; he is irritated to anger by every thing he sees, and he is so timid that he is troubled as soon as any one approaches him." "From mistrust, these patients soon pass to fear and hatred; and in these new moral situations, they repel their relations

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* Dictionaire de Medicine. Art. *Folie.*

† Esquirol, Observations on the illusions of the Insane. Liddel's translation, quoted by Prichard.

and friends, and welcome strangers."* "With these moral dispositions, if left in the bosom of his family, the tender son, whose happiness used to consist in living near his mother, and in following his father's counsels, persuaded, that they wish to disgust him with his home, in order to drive him from it, falls into deepest despair, or escapes to destroy himself."*

"In mania or raving madness, the condition of the patient is such as to render the necessity of confinement obvious to common sense, both on account of the safety of the individual and that of his family, without adverting to the advantages resulting from such a measure in the promotion of recovery, and in the facility of applying remedies. In a great proportion of the cases of monomania, the propriety of adopting the same course is almost equally evident. The understanding is in this disease so disturbed, and the moral affections of the individual so perverted, that no alternative seems to be left."†

"It is now conceded by all, who are best acquainted with the management of the insane, that the first element in their moral treatment, is their removal from acquaintances and former associations. One prominent advantage in such removal, is the promotion of the second element of treatment, that of withdrawing the mind from its hallucinations, and attracting it into a new current of thought. New objects must be presented to the view, new incentives to the mind."‡

It is needless to quote more authorities upon this subject. They would be but repetition of the same opinion; for the observations of all have convinced them of the same truth. Within a few years, the States of New Hampshire, Connecticut, New Jersey, Pennsylvania, and Maryland, have appointed commissioners to investigate the condition of the insane poor in their limits. These commissioners have made reports,‖ and all give melancholy proof of our position. They show, that of all the pauper lunatics, at their homes, or confined in jails, houses of correction, or poor-houses, none are cured, few alleviated, but most become confirmed in chronic

* Esquirol, Observations on the Insane: Liddel's translation, quoted by Prichard.

† Prichard. ‡ Earle, visit to 13 asylums. ‖ Prison Dis. Soc. Reports.

insanity. The able and comprehensive Reports of the Prison Discipline Society confirm this opinion. And that society, true to its noble and benevolent purpose, has used its great influence to persuade sane men to give their insane brethren the earliest, and therefore, the best chance of relief in the institutions especially built and set apart for them.

It would seem almost useless to look abroad for any authority in this matter, when we have such abundant proof at home. Probably no inhabitant of the Western country, and very certainly no physician, has been so fortunate as not to have seen, in his own neighborhood, some lunatics whose insanity has grown old and confirmed, from neglect of proper and efficient means of relief. These being retained at their own homes, and in the bosom of their own families, their disorders have become chronic and perhaps hopelessly incurable. Such cases are familiar to us all; and who of us has seen a case of recovery under these domestic influences? Who of us has not seen instances of men changed, either by slow process, or by sudden transition, from mental soundness to mental derangement; from amiable gentleness to such irascibility of temper, as to make them almost or even quite intolerable in their families? And while the tender and affectionate relations and anxious friends are hoping, that another day or another month will remove the hallucination or wear the madness away, and restore the lunatic to his right mind and to their former confidence, that other day and other month pass by, and only leave the alienated patient a little and a little more confirmed in his madness. Their hope dwindles before the unrelieved, but strengthening disorder: despair succeeds to hope, and at last comes a bitter reconciliation to this afflicting dispensation, as men become reconciled, by habit, to any calamity, which they must endure. Of all these sorrowing friends that have hoped for this mental healing at home, how many have been gratified? And of all our profession, that have encouraged these distressed relatives to hope, in these circumstances, how many have found their promise fulfilled in the event?

The theory of the nature and the process of the disease, the testimony of all writers upon insanity, and of all those particularly devoted to its cure, and, more than all, our own observation prove, that home is not the place for the recovery of the lunatic, and that separation from familiar scenes and people is the first and a necessary step toward the accomplishment of this desirable object."*

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* There are, of course, some exceptions to this general rule. There may be a few cases, which will not be benefitted by the removal from home. A very few may even be injured by being brought into the company of other lunatics.

When the disorder of the understanding is restricted to one or a few subjects, and the lunatic has his reason sound and clear on most matters, it is not so easy to determine the question of removal. Sometimes opposition to the will of a monomaniac, whose insanity is limited, may even disturb more of his sound faculties, and increase the insanity, or even create general mania.

If the monomaniac still retains his affections for, and his confidence in his family and relations, it may seem cruel to deprive him of their attentions. Nevertheless, if, notwithstanding his attachment to home, the subjects of his illusions are about his ordinary affairs, or haunts, or associates, it is still best to remove him.

Esquirol admits, that if the illusion of the insane relates to objects of indifference, and excites no strong emotions; if he has no aversions to his home and the persons with whom he lives, although confinement may be sometimes useful, it is not absolutely necessary."* "But if the patient, retaining a large portion of his intellect, has a strong attachment to his relatives, it is to be feared, that confinement might aggravate the disease."†

Some few melancholic patients may not be benefitted by a removal. Their dejection and gloom may be aggravated by such change, and particularly by the residence among similar patients.

Yet, after admitting these exceptions, the general rule of separation holds good; and though, like all rules of medical practice, they are neither mathematically exact, nor universally applicable, still the propriety of separating the lunatic from familiar persons and things, demands our first consideration, in every case; and we should be ever ready to do it; for almost all require it, and rarely is any one injured by it.

* Prichard. † Esquirol. Observations, quoted by Prichard.

It being then determined that the lunatic should be separated from his home and friends, the next question arises: Whither shall he be sent? Throughout the civilized world, and in Great Britain and America especially, this question has been very promptly and practically answered, with regard to a portion of lunatics at least. In all states, until within a few years, when a more enlightened and benevolent policy has in some been adopted, and in a few states, even now, imprisonment has been, and is the ready and efficient means of restraining the furiously mad. The uncontrollable and the violent, those who were dangerous to the public peace, such as committed assaults upon the persons or property of their neighbors, the bold maniacs, that kept fearful society in trembling awe of them, have been sent at once to the county jail, to the town work-house, or to some strong rooms especially prepared to hold them fast. This was a remedy for the public, but not for the patient. It restrained his hands, but it did not control the wanderings of his spirit, nor calm the madness of his feelings, nor confine the vagaries of his delusions. The utter worthlessness of this sort of confinement is most manifestly proved by the commissioners of New Hampshire, Massachusetts, Connecticut, New Jersey, Pennsylvania, and Maryland, in their very valuable reports upon the state and condition of the insane poor—very many of whom had been confined in their prisons and houses of correction for years—varying from one to forty, and not an instance of recovery is reported.* Not only no cures were obtained, but the report of Massachusetts says, with striking truth, "Were a system now devised whose express object it should be, to drive every victim of insanity beyond the limits of hope, it would scarcely be within the power of a perverse ingenuity, to suggest one more infallible than that which for so many years has been in practical operation among us."† So this plan is worse than useless.

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* Prison Discipline Society Reports.

† State Lunatic Hospital Reports, p. 19.

Travel—change of scene and occupation—placing the patient amid objects which may divert his thoughts, and change the course of his reflections; these are found beneficial in some recent cases of partial derangement.* But to say nothing of the great expense which such a course of treatment must require, we shall find but few, that would derive advantage from travel. The patient cannot be under the restraints that the cure of insanity requires, nor be kept from the external influences, that might aggravate the disease, nor be so well subjected to the suitable remedies.

It has been the practice with some, to send their insane patients or friends to board with some physician or other judicious person's family, remote from home, for the purpose of cure. For some cases, in which the patient retained his good temper, was easily managed, and required no restraint, this plan has been very happily successful. But most lunatics could neither be managed nor properly attended to in a private family. The needful and convenient means of governing and managing the insane, are not to be found in any private habitation. The master of such a house cannot have the authority, nor the servants the influence necessary for this purpose.† Georget says, that from an aversion to sending a lunatic to a public hospital, the friends sometimes send the insane to a house especially destined to receive a single patient, and there they surround him with strange attendants and servants. This is not only very expensive, but it fails of its object. For it is next to impossible to procure a perfect isolation; for the relations and friends are under strong temptation to visit the lunatic, and he very soon discovers that all this household and

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* Prichard.

† "A private dwelling is ill adapted to the wants and requirements of such an unfortunate being. And even if it did contain all that is requisite, still there is little possibility that the patient could derive much benefit from persons who are neither acquainted with the proper system of treatment, nor if they were, could they possibly adopt it, and at the same time attend to any other business. A lunatic demands the whole time and attention of his guardians."—*Hill, on Insane Asylums, p.* 7.

preparations are for him, and then he is almost as little governed as if he were in his own family.*

This plan of placing the insane in private families, is too costly for most people, and is not sufficiently successful as a means of cure, to be advisable as a general rule for even those who can afford the expense.

Thus we see, that of these three modes of treating the insane, the first, imprisonment, is worse than useless—even exceedingly injurious. The second and third, travel and private boarding, are suited to but a small portion of cases; and are so expensive as to be beyond the reach of that small number who might be benefitted by them.

The only other remedy now proposed, is the HOSPITAL. In a preceding† article we demonstrated, that in the best asylums insanity was proved to be a very curable disease; as much so as fever, pneumonia, or dysentery. The power of the asylum is one grand triumph of modern science, over what has been hitherto supposed an unconquerable derangement; and in its latest improvement, it is the noblest institution of humanity.

In Kentucky, Governor Adair said, in 1821, that the old system of supporting lunatics had proved to be wholly inadequate to purpose of restoration of mental soundness.‡ This was a matter of commonest observation, and familiar to the eyes of all. In the establishment of the hospital there was nothing to be lost, but every thing to be gained. The earliest hospitals of Europe did not advance much. They were but a better sort of prisons. But Pinel's‖ influence began a reform in these, which benevolent men elsewhere have carried

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* Dict. De Medicine, Art. Folie.

† November Number, p. 449, etc.

‡ Message, 1821.

‖ See that most interesting account of Pinel's unchaining the lunatics of the Bicetre, in 1792, in Browne, Hill, British and Foreign Medical Review, No. I. p, 286; Pris. Dis. Soc. Reports, and also North American Review, Vol. XIV. p. 103.

on from time to time, as light and love beamed upon them. These improvements, in the treatment of insanity, have been the most rapid within the last ten years. Pinel had no conception of the extent, to which his principles would ultimately grow, nor of the power which they were destined to acquire. When Governor Adair, in 1821, proposed to this state to establish a Lunatic Asylum in Kentucky, he said, "if only one out of twenty of those unfortunate beings, laboring under the most dreadful of all maladies, should be restored, will it not be a cause of gratulation to a humane and generous public?"* If to the eye of this benevolent magistrate, the recovery of one in twenty lunatics would justify the building and maintaining a hospital; and the probability of cure, amounting to only one-twentieth of a certainty, were reason sufficient for sending a patient from his home to the asylum, how would his noble heart have rejoiced to see that this very institution, which he recommended with such feeble hope, now cures eight times as many of all that are sent, and almost twelve times as many of the recent cases?† And still more, that in the more modern institutions, ten times as many are cured as he thought would warrant the abandonment of the old and the adoption of the new system.

In the United States, there are nineteen public and two private asylums for the insane. Four of the former are in the Western country—at New Orleans, Nashville, Tenn., Lexington, Ky., and Columbus, Ohio. All others are beyond the Alleghany mountains, and can be reached by us only through a long and tedious journey. We will now examine the various and particular merits and advantages of each of these institutions, so far as they concern us of the West. But before entering upon this examination, it is well to fix in our minds clearly, what we are to hope for, and what we may reasonably expect.

I. We hope for complete restoration of our patients to reason.

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* Message. Rep. Journal. † See Report for 1841.

II. If this be not attainable, we hope for such amelioration of the disorder, that the patient may live peaceably and comfortably in his own family and among his own friends.

III. If, after all, he cannot be rendered safe to be at large, or at his house, then we desire that he have a comfortable home, where he will neither be exasperated nor neglected.*

IV. We desire, that the means used for these purposes, be of the gentlest and most judicious kind; that none of the severity of olden time be applied; but that all the tenderness and affectionate delicacy of home be used, in the new abode; that restraint be only so far applied as to prevent self-injury, or harm to others, and guidance sufficient to direct the wandering thoughts to a right channel.†

Judging by the results of the best asylums, we may reasonably expect the recovery of eighty or ninety out of every hundred, who have been insane less than one year; and the recovery of ten to twenty in a hundred of those, whose disorder has been of longer continuance. Or applying the doctrine of chances, there is eight to nine-tenths of a certainty, that any recent‡ case will recover, and one to two-tenths of a certainty, that any chronic case will be restored.

If any case, old or recent, be not curable, we may expect

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* See Dr. Ray's Report on the Maine Asylum, for 1841.

† "It cannot be too widely made known, that in a properly constructed and well regulated asylum, the insane may be treated not only much more easily and effectually, but also *much more mildly* than at their own homes."—Report of the Lincoln, Eng. Asylum, for 1837, quoted by Hill.

‡ We use the word *recent* to express those who have been insane one year and under; and *old* or *chronic* for those insane over one year. In this sense are these terms used by most writers; and in all reports quoted in this article, except those of the Vermont asylum, which include in the recent class, only such as have been insane six months and under, and in the chronic class, those who have been disordered more than six months.

These terms, "recent," and "old," refer only to duration, and include all, within their respective limits of time, whatever may have been the cause of the malady. The numbers used here and hereafter to designate the probability of cure, refer only to the average of cases, arising from all sorts of causes. But under this average, there must be a great

a great probability, that he will be so much improved that the maniac will cease to rage, the excitable will be quiet, and the distrest be comforted, so that they may live in their own families, and be tolerable in society.

We may confidently expect, that this restoration or improvement will be accomplished by such gentle means as would not shock the feelings of the tenderest relative.

Let us now see, in the first place, how far the several insane asylums of our country are accessible to the people of the West; and in the second place, how well they can fulfil our expectations of cure, amelioration, and gentle treatment of our patients.*

The Insane Asylum at New Orleans is simply a building in the yard of that noble institution, the Charity Hospital, of which it is a branch. It is built well, strong, and perhaps convenient; certainly it will answer the purpose of security. But there is such a small extent of grounds, so little room for exercise, so little preparation for labor, amusement, or other occupation, that surely they have not the usual, and what is elsewhere supposed, the necessary facilities for curing the in-

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difference of probability, owing to difference of causes. Thus insanity produced by ill health is much more curable than that caused by masturbation.

Dr. Woodward, in his seventh report, gives the result of his observation of a thousand cases, and shows that of the whole number of cases, recent and old—

Arising from ill health	63 ⅔	per cent
Religious causes	58	"
Domestic afflictions	56 ¾	"
Intemperance	49 ¾	"
Masturbation	23 ¾	" recovered.

It would be interesting to know, whether the same relation of curability holds between these classes, in their recent and chronic states: whether the chance or probability of recovery diminishes with the age of the disorder, when produced by any one of these causes, more rapidly than when produced by any other.

* An account of these asylums was given, for another purpose, in this Journal, page 442, Vol. IV. No. VI., to which the reader is referred for a fuller notice of some of them, than is here given.

sane ; and we ought not to expect so much from them as from others. This asylum, however, has as yet hardly gone into operation, and we leave it to develope its powers, and to manifest its results ; by these shall it be judged hereafter. But, whatever may be its success, it is situated at the extreme South, and in New Orleans ; and therefore, as our lunatic patients must stay in a hospital for months or years, until they recover, this institution is only suited to the people of that latitude, who are accustomed to the diseases of that climate, and to the peculiar epidemics of that city.

The Tennesee Lunatic Asylum is richly endowed by the state, and can accommodate about a hundred patients. Farther than this we are not informed. We know nothing of its means and facilities for the management and cure of insanity, yet we believe the liberal grant from the government affords it means of great usefulness ; and we trust, that the reports will show a success corresponding to our expectations. It is intended to receive both the insane poor and pay patients.

The Kentucky Lunatic Asylum was established before the late discoveries had shown, how far this disease was controllable by attention, skill, and most faithful and tender watchfulness, in conjunction with variety of occupation. The original plan did not include a physician exclusively devoted to the institution, nor workshops, nor riding nor reading, nor a great variety of attendants. Nor was labor at first designed as one of the great means of improvement. A chaplain and religious worship was not then considered necessary for such an institution. A physician is engaged to visit the Asylum once a day; but his pay for this is so small, that he cannot neglect his general practice, to spend much time among the lunatics. A few attendants are employed, rather to guard and wait upon the patients, than to be their companions to guide their thoughts or control their feelings. Since the establishment of this asylum, the State has not altered the original plan, nor provided officers, and attendants, and means, according to the spirit of this improved age. But an effort is now making in the legislature to obtain such farther grants and

privileges from the State, as will place this institution on as good a foundation as the best in the United States. When this shall be done, and a permanent resident physician, a chaplain, and a suitable corps of attendants shall be provided—when sufficient shops, lands, and all other means of labor abroad, and all facilities for occupation in the house, shall be obtained, then, we doubt not, this will take rank among the first institutions of the country, and be as desirable an abode for the lunatics of this and other western states, as any other asylum is for the insane of its region.

By the reports of 1839 and 1840, we find, that, counting the patients received in these two years, twenty-eight per cent of the recent cases, and thirteen per cent of the old cases were cured—counting the number discharged—forty-one per cent of the new cases, and thirteen per cent of the old cases were cured.

By the report for 1841,* we find that the success was greater

**Statement of the state of the Asylum for* 1841.

	Old cases.			*Idiots and Epileptics*			*Recent cases.*			*Total.*
	Male.	Female.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	
Remaining Jan. 1, 1841	49	53	102	16	19	35	2	3	5	142
Admitted since	26	12	38	6	4	10	18	6	24	72
	75	65	140	22	23	45	20	9	29	214
Of whom have died	11	5	16	6	3	9	2	1	3	28
Discharged well	5	5	10				11	6	17	27
Improved	4	1	5				2		2	7
Remaining Jan. 1, 1842	55	54	109	16	20	36	5	2	7	152

If the foregoing successful results of the operation are presented with the present resources, what happy effects could we anticipate, would the Legislature authorize the Managers to improve and enlarge the means for moral and physical treatment! We want every variety of occupation to divert the mind from its curious and various illusions.

during that year; for, counting the discharges, there were, of the old cases, twenty-five per cent cured, and twelve and a half per cent improved. And of the recent cases, there were seventy-seven per cent cured, and nine per cent improved. Counting the admissions, there were of the old cases twenty per cent cured and ten per cent improved; and of the recent cases there were sixty per cent cured and eight per cent improved.

In consequence of the laws of Kentucky allowing the quiet and the peaceable to be maintained at their own homes out of the public treasury, and of considerable general prejudice against hospital establishments, few, but the worst cases either of the pauper or the wealthier classes, are sent to the asylum.* These can have, not only much less chance for

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Besides agriculture and horticulture, various mechanic operations should be employed. Christian worship, libraries, music, dancing, walking and riding, with complete bathing establishments, are unconditionally required for thorough success. Ornamental as well as useful improvement of the grounds and gardens, are considerations not to be forgotten, as important to render complete such an establishment, for the sick mind.

With comparative little expense, Kentucky can have a retreat for her insane, both a pride to the State and a blessing to a class of human beings whose condition should enlist the noblest of our feelings."—*Dr. Bush's letter to the Commissioners of the Lunatic Asylum, Jan. 1st*, 1842.

*To corroborate our assertion in a former article on this subject—page 476 of this volume—that "the most obstinate and incurable cases are selected out of all in the State to be sent to this hospital," we here add from Dr. Bush's letter:

"This asylum receives a very large proportion of congenital idiots, and hopeless cases of epileptics: all of which class of patients must die sooner or later, no rational hope existing to improve or even prolong a miserable existence. Such patients constitute, every year, by far the greater proportion of deaths reported. A patient, when received by the commissioners, is never discharged unless he or she be cured. So that many State patients, comprising idiots, epileptics, old cases of all the various forms of insanity, considered the scientific world over as incurable, must accumulate from year to year, and thus constitute a great proportion of the standing residents in the house, while in the very nature of things the annual lists of mortality have, in this fact, under the most favorable circumstances, an unavoidable increase."

recovery from insanity, but also a much greater chance of death, in consequence of their broken constitutions, and their liability to other diseases.

Nevertheless, with all those difficulties, the Kentucky asylum offers, even to these unpromising classes, sixty hundredths of a certainty of cure to a recent case, and twenty hundredths of a certainty of cure to an old case.

This asylum was primarily intended for the insane poor alone; but, for some years, it has received other patients from this and other States at the cost of $2,50 per week.

The Ohio Lunatic Asylum is exclusively a State institution, and admits—1st, the poor and the violently troublesome; 2d, others belonging to Ohio at the cost of $3 per week. This is an establishment of the first class for usefulness and benevolence. It is liberally provided with all means for the amusement and occupation of the patients—with a farm and garden—with shops, and horses, and vehicles—with books and papers, games and musical instruments. And the administration corresponds to the physical means. Dr. Awl, the superintendant, is a man singularly adapted by his skill and moral character, to direct such an establishment. His heart and his hands are in the cause of suffering humanity. The doors of his institution are thrown open to the poor and the distressed, and his work is carried on as a great moral enterprise, upon the principles of Christian charity, and according to the active and liberal spirit of this enlightened age.* His assistant physician, chaplain, ond other co-operators, are men and women of discretion and tenderness, and perform their duty of managing and encouraging the lunatics, with the kindest faithfulness. Their patients are treated as unfortunate friends—suffering, but not guilty—to be governed, but not punished.

All these means are brought to bear, with admirable effect, upon the disordered understanding and perverted feelings. The various sorts of labor abroad and in the house—the reli-

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* Reports.

gious services—the reading—the parties for conversation, music and dancing, occupy them, so that they forget their illusions. The frantic have no time to rage, and their sanity creeps upon them. By these means, they have cured eighty-five per cent of the recent cases, and forty-one per cent of the old cases discharged; and therefore we may look for eighty-five hundredths of a certainty of cure of an average recent case, and forty-one hundredths of a certainty of a cure of a chronic case.

This institution accommodates each patient with a room, but is only open to the residents of Ohio. There are in that State thirteen hundred and sixty lunatics and idiots, of which four hundred and sixty-six are at public charge. If we deduct from this total number all the congenital idiots, the imbecile, the paralytic and epileptic, and those in the last stages of senile insanity, we shall find, without doubt, at least five hundred lunatics, who may be considered as fair subjects for the remedial measures of the asylum, and of whose restoration much hope may be entertained. The public guardians and the private friends of these unfortunates should not delay to send them at once to Columbus, and give them the earliest and best opportunity for recovery. That institution, in its charitable provisions, offers every inducement for the poor to come; and in its elegant arrangements and facilities, it invites those who are more accustomed to the comforts and refinements of life. And if the people of Ohio regard their true interest, and the good of their alienated citizens, they will send every hopeful lunatic at once to their asylum; and in that case it will not hold them. Its present accommodations will not admit more than a quarter of those who need its soothing and healing care. But the liberality of the State that began so noble a work, will enlarge it, so that it may fully answer its great purpose.

These are all the institutions of the west, and they cannot contain a fifth of the lunatics of the west who ought to be in them. All the other hospitals are beyond the mountains, and patients have often been carried from this valley to be healed in those eastern asylums. To which then of these shall we send our insane?

The nearest insane asylum which is open to us, is the *Pennsylvania Hospital* near Philadelphia. This is an entirely new institution, though a branch of the old hospital* of that city, from which it received the insane patients in 1841.

"This new asylum is under the superintendence of Dr. Thomas Kirkbride. It is indeed a splendid establishment: no expense that would contribute to the suitable accommodation of the patients, having been spared, in its erection. It has a large farm connected with it, of which forty-two acres are surrounded by a high stone wall. Under the care of its intelligent superintendant, this will undoubtedly be one of the best institutions in the country."† This will be managed on the right principles of kindness, watchfulness, and occupation. With all its facilities for governing and curing its inmates, with the high moral and scientific character of its head, and the discipline and discretion of its other officers and attendants, this institution makes high promise of good to its patients, and holds out great inducements for the lunatics of this and the other western States. Another year will tell, how well it can fulfil the great hope we have of it.

The cost for board and attendance is five dollars per week. Bond is required for the payment.

The Friends' Asylum at Frankford is six miles north of Philadelphia. Its farm, gardens, shops, houses, carriages, library, museum, games, billiard tables, chess and gammon, serve admirably their purpose of occupying the attentions and amusing the feelings of the insane. Religious services are also valuable auxiliaries to their other means of cure. The buildings are ample; they accommodate about seventy patients, and these are classified according to their sex, and to the kind and stage of the disease. This asylum is under

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*The Pennsylvania Hospital is the oldest in the United States. It was established in 1752, and received lunatics as well as other patients. From 1752 to 1840, thirty-four per cent of lunatics were cured, including cases of mania a potu previous to 1823.

† Earle.

the immediate control of Dr. Pliny Earle, who has been long devoted to the interests of insanity and successful in treating it. The whole administration is of the mildest and most approved method of modern times. The officers and attendants are men and women of amiable tempers and bland deportment. No severity nor harshness are ever admitted there. Kind words, tender sympathies, and the sweet power of love, are their means for controlling the patients. No means are used but such as would be allowable, and even desirable, in private practice, in the midst of the most anxious relatives of the insane.

The reports state that, in twenty-four years, forty-two per cent of all the cases have been cured. But this asylum has improved with the age, and the later years have shown better success than this general average. In 1840, of eight who had been insane less thau three months, seven recovered, and one died. Of fourteen, who had been insane previously and recovered, and whose last attack was of less thrn three months standing; nine were cured, and five improved. Of twenty-one insane from three to twelve months, ten recovered, eight improved, one remained stationary, and two died. Of ten insane from one to two years, four were restored to health, three were improved, two unimproved, and one died. Of fifty-five* insane more than two years, three recovered, eight improved, four died, and forty were stationary.†

Taking these facts for data, for our hope of benefit in that institution, if our patient belong to the first class, he will have seven-eighths of a certainty of cure—if to the second class, (i. e. if insane less than three months, though not the first attack of the disease,) he may have sixty-four chances in a hundred for recovery; and if to the third class, his chance for recovery will be forty-seven in a hundred; if to the fourth class he may have forty-hundredths; and in the fifth class five hundredths of a certainty of restoration at Frankford.

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* Only seven of these had been insane less than five years, and eight ess than ten years.

† Earle. Report for 1840.

In order to be admitted to this asylum, bond must be given by two persons—one of them at least to be resident of Philadelphia or its vicinity—to provide suitable clothing, to pay for all damages done by the patient, and to pay at least four dollars a week for board, medicine, and attendance; and to take the patient away on his discharge, or bury him at his death.

The Bloomingdale Asylum is on Manhattan island, six miles north from New York city, under the charge of Dr William Wilson. It receives one hundred and forty patients. During the twenty years of its operation, it has cured seventy-seven per cent. of its recent cases, and eleven per cent. of its old ones. In 1840, seventy-four per cent. of recent, and and thirty per cent. of old cases recovered, and nearly six per cent. died.*

Such success as this is evidence of good management. "The first endeavor is to classify the patients, and assign them to their proper attendants, who are each responsible for the personal cleanliness of their particular charge. Twenty attendants look after one hundred and thirty-five lunatics. These are expected to interest their patients, in their different amusements, accompany them in their walking about the grounds or in the neighborhood, take charge of them, when they ride out, and provide against escape or accident. All the patients who are in good health breakfast at seven, dine at one, and sup at six o'clock. In the interval between meals, they are generally employed in reading, walking, riding, or other amusement or occupation, and at proper seasons attend public worship."*

The directors "find that mild treatment, recreation, reading, and employment upon diverting objects, with amusements of various kinds, riding, walking, playing at games or on musical instruments, are much better calculated to remove gloomy impressions from the mind, than any course of harsh treatment."* We could add to these excellent means, labor,

* Report, 1840.

which has been most advantageously employed in other asylums.

This asylum is a branch of the New York City Hospital. It has very rich endowments, and receives ten thousand dollars a year from the state. Yet, on account of the very extensive and liberal accommodations and facilities for treating the patients, the cost for board, medicine, and attendance, is about $4 50 per week.

The Connecticut Retreat for the Insane, is at Hartford, in that most lovely valley of the Connecticut river. It is now under the care of Dr. Amariah Brigham, who has been long devoted to the philosophy and maladies of the mind. This asylum is furnished with all the apparatus for employment and amusement of the deranged inmates, which benevolence and skill have suggested. They have labor on land and in shops, riding in carriages, games of all sorts, books, newspaper and pamphlet literature, parties, music, dancing, and religious worship. Every thing is done by the watchful attention and faithful skill of the superintendent, and his fitting coadjutors, to relieve the distress, and to occupy the minds of the patients, to withdraw them from their illusions and to soothe the agony of their spirits.*

Beside Dr. Brigham, there are an assistant physician, a chaplain, thirteen attendants to take charge of seventy-nine patients, and four others, who have each the charge of one

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* Report of Trustees.

The benevolent secretary of the Prison Discipline Society visited this hospital, and says: "We saw the apartments of the men; saw and saluted many of them as we passed through the halls, they appeared cheerful and courteous, and were glad to see us. The patients were in good condition, with respect to their persons and dress; the attendants polite, intelligent, and kind; the furniture, beds and bedding, all clean and sweet. The order of the establishment, thus far, was strongly in favor of improvement and progress toward a high standard. The superintendent showed much taste and skill, as well as urbanity, kindness, and controlling influence over mind, as we proceeded."—*Prison Discipline Society Report*, 1841.

lunatic, that may need particular attention, and ten other assistants to do the household work.

The whole management of this hospital is of the best kind: gentle, firm, watchful and affectionate; and it has been the most successful in the country: twenty-four per cent. of the old cases, and eighty-four per cent. of the recent cases have recovered, and six per cent. have died there. Supposing the present officers will do as well, (and we doubt not they will do better,) we may expect eighty-four hundredths of a certainty of cure for any average recent case, and twenty-four hundredths of a certainty of cure for old cases, that may be sent them. The whole cost of maintenance there is $4 per week.

The *Vermont Asylum for the Insane*, is also in that beautiful valley of the Connecticut, in Brattleboro, eighty miles north of Hartford. It is there surrounded by the richest scenery, composed of the grandeur of the mountains, and the loveliness of the highest cultivation and beauty of the meadows. Here nature alone might almost calm the maniac's frenzy, and cheer the drooping heart of the despondent.

This institution has ample accommodations for a hundred lunatics, and had ninety-five at the date of the last report, October, 1841. Each patient has a separate room in the night, and walks and mingles in halls common to the individuals of his class in the day. They are occupied with agricultural and mechanical labor—with public worship and reading—with riding, walking and games: and though watched with the most assiduous attention, they are never restrained by physical violence, nor overawed by harsh or threatening power. But it is made the duty of each officer and assistant to endeavor to secure the confidence and good will of the patients. For this purpose they treat them with the greatest kindness and forbearance.*

The zeal and discreet energy of the most faithful superintendent, Dr. William H. Rockwell, aided by a worthy body

* Report, 1841.

of associates, have been singularly successful in curing and improving the subjects of their charge. They have cured eighty-nine per cent. of all recent* cases that have been discharged, and twenty-eight per cent. of the old cases. If we suppose, that those remaining at the asylum under treatment to be as curable as those discharged, then we may look for a probability of cure, amounting to eighty-nine hundredths of a certainty for recent cases, and twenty-eight hundredths of a certainty for old cases.

The McLean Asylum for the Insane, at Charlestown, Mass., under the charge of Dr. Luther V. Bell, is one of the best endowed and best managed in the country. It has been many years in operation, and has been enabled to adopt every improvement, which its officers have discovered, or others have suggested. The high-toned benevolence of its trustees, the active observation of its physicians, have sought out all the means for the occupation and cure of the insane, that have been used in the hospitals of Europe or America.

The magnificent and convenient architectural arrangements of the buildings admit of the classification of the patients into at least a dozen different families, according to the developement and condition of the disorder, these have each their proper sitting, sleeping and dining apartments, &c.† The abundant means for the occupation of the alienated—the farm and elegant garden, filled with flowers and shrubs of every sort—the shops, and means for riding abroad—the library—the games of chess, gammon, draughts and cards—the musical instruments—the parties for sewing, dancing, &c.—the religious services, and, above all, the ever present and faithful companionship of the superintendent, the officers and attendants, all have the happiest influence over the vagaries of the deranged intellect, and the excitement or depression of the morbid feelings.

"The importance of securing the services of an elevated,

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* Recent cases here include the insane six months and under.

† Report.

respectable, and cultivated class of persons for the responsible duty of attending upon the insane, was early recognized in this institution ; to obtain whom no trouble or cost was to be spared. We have never been obliged to feel the want, which most writers upon insanity, and many institutions so feelingly deplore, of a proper kind of assistants. There are, in the interior of New England, a class of young men and women of respectable families, adequate education, and refined moral feeling, who are willing to devote themselves for a few years to this calling, under the encouragement which is offered them, of a fair pecaniary recompense ; and what is a still higher inducement, that of knowing, that their services are deemed of a highly respectable character. We never employ those in whom we would not place implicit confidence."* "The attendant will cheer the desponding, check the noisy or the petulant, turn the thoughts of those occupied in insane illusions, into a new channel; walk, ride, and engage in amusements and employments with them."* Thus, none but persons of the sanest minds, the purest principles, and the most disciplined habits, the most amiable tempers and blandest manners, are allowed there to come in contact with the insane. The most perfect sanity is brought to bear upon insanity, even in the most casual associations. None of the harsh physical restraints, that once were used in asylums, are there. None of the stout and hardened warders to stand sentry ; no reviling taunt, nor chilling authority, are there ; but the mildest persuasion, the most affectionate watchfulness, and the kindest companionship make that the home of the distracted; they calm the frenzied, and cheer the disconsolate.

From its high reputation, this institution has received very many difficult and incurable cases ; and on account of its expensiveness, the means and patience of friends get exhausted, and many patients are taken away, before a full trial is made of the influence of the hospital over their disease ; and therefore more are discharged uncured, or merely improved, in proportion to the restored, than would be otherwise. Yet, even

* Bell's Report, 1840.

with this deduction from the per centage of recoveries, this institution has been remarkably successful. Under the management of its present able and excellent superintendent, in the year 1838, the asylum cured every recent case that was discharged, except such as were taken away before full trial, and those who died.* In other years, they had not quite this degree of success, and, like other asylums, were obliged to discharge some voluntarily, whose cases resisted all their efforts at restoration.

The late reports of this hospital do not discriminate between the old and recent cases, and therefore we are unable to give precisely the results of these two classes, as we have done concerning others. Yet we find that fifty-nine per cent. of all that were discharged during the last four years, were cured; and of all under care, less than five per cent. died in each year.

For admission, application must be made to Dr. Bell, Charlestown, or to either of the trustees in Boston. When practicable, they require a description of the patient's disease, its early manifestation and progress; an account of his habits, age, social and domestic relations, and of the course pursued with him during his alienation. They require a certificate from a physician, that he is insane; and a written request from his nearest friend or relative, that he be admitted into the asylum, and lastly, an obligation, signed by two responsible persons, engaging to pay for clothing, and other things necessary for the health of the patient—for the board and wages of a special attendant, if necessary, and for board and medical attendance, $4 50 per week, and also to remove the patient, when discharged, or pay funeral charges, in case of death.*

There are asylums at Colombia, South Carolina, and at Milledgeville, Georgia, from which we have received no reports; we only know, that their states have made liberal grants to them. But whether their benefits are confined to

* Report, 1840.

those states, or whether they are open to us, and therefore available to the southern part of the Mississippi valley, we cannot tell. We hope to receive their reports and to learn that their usefulness is commensurate with their means.*

Beside these public hospitals, there are some private institutions worthy of our consideration.

Doctors S. and G. H. White have one at Hudson, New York, in which they treated eighty-four patients in 1840, and discharged forty-eight. Of these last, eighteen were recent cases, and twenty-seven chronic, Of the former, fourteen were cured, two improved, and two died; of the latter, seven were cured, fifteen improved, and three died—making seventy-six per cent. of cures of recent cases, and twenty-six per cent. of old cases.† This must be the ground of hope for our patients, if sent there. "Family worship is continued daily, and with beneficial effect on the patients. We have no information in regard to labor and amusements,"‡ nor of their other means of cure.

Dr. Cutter has a private asylum at Pepperel, Massachusetts, which is furnished with the usual means for labor and amusement, formed in good hospitals, and is conducted upon the best modern principles, and is one of the best private hospitals for the insane in the country.§

In this review of the American asylums, we see that, twelve are open to us of the West,‖ and four only of these are within this valley. The others are far distant—the nearest, that at Philadelphia, is at least, three hundred miles from the most eastern point of our navigation at Pittsburgh.

To which, then, of these shall we send our insane? We

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* The Georgia asylum was intended for one hundred and sixty patients, and receives both the poor and the rich.

† Earle. ‡ Ibid.

§ Boston Med. and Surg. Journal.

‖ The state asylums at Williamsburgh and Staunton, Va., at Worcester, Mass , at Augusta, Maine, at Baltimore, and those at New York and Boston, are all exclusively for the states or cities to which they respectively belong.

must judge them by their fruits. We learn from the foregoing facts, that the Kentucky asylum offers less probability of cure than other better endowed and more improved institutions; though we believe the legislature will put it in the power of its administration to make this as useful as any other. As it is now, if our patient's means permit a distant removal, and if they do not live in Ohio, they will do well to cross the mountatns. Yet, if this be impossible, the institution at Lexington is so much better than all other modes of treating insanity in Kentucky, that we ought not to hesitate for a moment to send our patients to it.

The Ohio asylum is all that could be expected or desired, except in extent; for it cannot contain a quarter of the insane of that state, and to all others it is closed. With such a means of cure within reach, it is a matter of astonishment, that there are not five hundred enjoying its advantages.*

All of the eight open institutions east of the Alleghanies, have physicians devoted exclusively to their inmates. All are managed on the modern principles of benevolence and occupation. All have religious worship, exercise, and amusement. All except those in New York employ labor; and we may feel assured, that in whichever of these we may place our patients, though far from their natural friends, they will find friendship, and tender attentions, and the faithful skill, which the present age has developed. Yet, if among these offering each so great a promise of good, we were to make a selection, we would prefer the McLean asylum, on account of the great and liberal and judicious preparations for the cure and the comfort of its residents. And especially for such, as have been accustomed to the refinements and luxuries of life, are the whole material and administration of this establishment suited. But if long residence for a term of years be wanted, or if economy be desired, the Brattleboro asylum is most favorable on account of the beauty of its location, and

* We are glad to see that there is an effort making, in the legislature of Ohio, at this moment, to enlarge this asylum.

its cheapness. The Hartford asylum has been exceedingly successful and satisfactory. As to the others, we leave their statistics and their history to speak for them, and these accounts are honorable to them and cheering to humanity.

We have been thus minute in describing these asylums, because for want of a definite knowledge of their merits, and of a conviction of the necessity of sending our patients to some one of them, most of our lunatics have been suffered to remain at home, with only domestic remedies for cure—the acute cases have become chronic—the curable have grown hopeless—and now we have a maniac and imbecile army of four thousand four hundred and fifty in the valley of the Mississippi.

No class of disorders so certainly yield to proper remedial measures, as insanity. And, on the other hand, none so certainly become incurable, if neglected. The recuperative powers of nature have less energy to heal this than any other disease; therefore, more than all others, this should not be left to heal itself. We should be as well prepared to treat, or to furnish means of treating our lunatic patients, as we should our fever patients. It would indeed be singular folly, for a physician to wait until he is called to a case of dysentery or bronchitis, before he determines upon the general principles of treatment; and having seen his cases, then get his books, for the first time, to learn the pathology of his diseases and the action of his remedies, and while he is reading his lessons, permit his acute cases to rush on to death, or to fast entrench themselves in the chronic state! If this be unfaithful preparation for the responsibilities, which we assume, as the advisers of the weak and the disordered, what shall we say to ourselves, if we are unprepared to advise our friends what course to pursue with a lunatic, and how they may save him, before all hope shall be extinguished?

Suppose a son of a family, that put their trust in us for counsel in sickness, should be taken delirious. He becomes irritable, violent, uncontrollable. He is suspicious of his best friends, and abusive of those, whom he before loved most.

His distressed parents, who had doated on him, and had rested every hope in him, know not what to do. In this agony, they send for us. We have been their medical guides, in all other derangements, and they rely upon us now, in their present grief, to tell them what to do. Shall we tell them, that we ourselves do not know what to do?—that insanity is mostly incurable?—that we can only bleed to bring down excitement, or give opium to quiet the nervous agitation? Shall we advise the restraint of chains to secure the family from being injured by him? Or confinement to prevent his running away? Or shall we not rather have our minds as well fortified for this emergency of mental disorder, as for the chance of meeting an attack of cholic or a fractured limb?

Having made our selection of an asylum as the means and interests of our patients dictate, we should not hesitate to send them to it, as early as possible after the attack of their disorder. We must not be deceived by any fallacious mildness of the early manifestations of the lunacy; nor think that because the symptoms do not grow violent, it is safe to wait, for the disease may be fast fixing itself within, and becoming daily more difficult to be removed. The derangement, which at first is only one of function, gradually grows to be one of structure. A few days' or weeks' delay may carry the disorder beyond the point of curability. Where that point may be, cannot be determined beforehand; but it certainly is the safest to begin the remedial measures as early as possible. Dr. Woodward estimates, that the chance for recovery, if taken within the first three months after the attack, is double of that in cases which do not begin treatment until the ninth month. Dr. W.'s tables show, that of cases of one year or less duration, eighty-five per cent; of cases of from one to two years standing, fifty-seven per cent; of those of from two to five years continuance, thirty-four per cent; and of such as had been existing from five to ten years, eleven per cent were curable. Dr. Tuke gives seventy-nine per cent of cures of cases less than three months—forty-four per cent of those from three to twelve months, and twenty-five per cent of those of more than

one year's standing, as curable. The reports of every hospital give a similar discrepancy between the curability of the recent, and that of the old cases, and manifestly prove, that we have every thing to gain for our patients, by early attention to their cure, and every thing to lose by delay.*

Having settled the question of removal, this should be done in all openness and sincerity. Deception should never be allowed toward the insane, for any purpose whatever. Dr. Allen says, "I consider it a point of the first importance, that truth should never be violated. If we begin by destroying confidence, we destroy the basis on which alone all moral good can be effected. It is quite a mistake to suppose, a system of deceit is necessary for the more quietly accomplishing their removal from home."† "I delicately and candidly tell them, that they are considered to be insane, that the disease has produced some change in their usual mode of thinking and feeling; that the object of the proposed visit is for their good."‡ "In this respect we should deal with them as we would with any reasonable person: we should tell them, that as they are deranged, another course is necessary, and it is for their benefit that we propose to remove them; and very few will object. But if they do object to the removal, we can inform them, that their going is a matter quite settled, and cannot possibly be altered."‖ And even then they will submit with much better grace, than if we deceive them, and

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* Such lunatics as do not show positive signs of incurability, and whose disorder offers any chance of cure, should be submitted to treatment at the earliest possible moment. We cannot commence too promptly the use of appropriate means. There is no doubt that insanity could be cured with much more ease, and much more frequently, if our remedial measures could be applied, at the very onset of the disease.---*Georget, Dict. de Medicine. Art. Folie.*

"The probability of recovery decreases in proportion to the length of time which may have elapsed between the period of attack and that of the removal."—*Hill, on Insane Asylums, p.* 9.

†On Classification, p. 29. ‡Ibid. ‖Ibid.

pretend we are going to another place, while we are, in reality, going to an asylum.

The directors of these hospitals complain very much of this deception, which is frequently practised to induce patients to go to them. Vexed and disappointed to find themselves in a place of confinement, which they did not expect, they are excited, and resist the first efforts at cure; or they are downcast and sulky, and refuse to engage in the usual avocations for relief. But in the best asylums this deception is removed at once. Dr. Bell, of the McLean Asylum, says, "Our first care is to have the accompanying friends communicate to the individual, in our presence, if this has not been previously done, as it should be, where he is, that he is brought here as a deranged person, that his stay will depend upon the judgment of the physician as to his recovery; and he is made to understand, that the extent of his privileges will necessarily be dependent on his ability to comply with the rules, and to control himself." "However well he may appear, or however incoherent, this communication is substantially made to him, and no false representations are permitted to be made from this time henceforward in our intercourse with him."* Such is the practice of Dr. Woodward, and indeed of every faithful superintendent of any insane asylum.† Deception not only increases the difficulty of getting our patient to accompany us to his destination, but lessens the influence of the institution over him.‡

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* Report, 1839.

† "No attendant or other person shall attempt to deceive or terrify any patient, or violate any promise made."—*Rules of the Lincoln Asylum.*

‡ It is a great error to suppose, that a lunatic cannot see facts and truth for himself, or that he can be cheated by false representations. In our pupillage, we saw a most affectionate mother offer a lunatic son a cup of valerian tea, saying, "Here's some good tea, my son." "Is it good?" said the maniac. "Yes." "But it is bitter." "No, my son, it is sweet." "Wont it hurt me?" "No, it will do you good." "Then, mother, if it is good, and sweet, and will do no hurt, let me see you drink half, and I will drink the rest." "No, my son, it is good for you,

From this examination we are led to the melancholy confession of the want of due provision for the comfort and the cure of the insane sufferers of the western country. In this broad and rich valley, from the lakes to the gulf of Mexico—from the Alleghanies to the Rocky Mountains, embracing a sane population of more than five millions, and lunatic population of more than four thousand, with no deficiency of wealth, skill, or benevolence, we have but four asylums for the insane. And these could not contain a tithe of all, who might be subjected to their influence, and not a fourth of those who could be benefited by them.

Even these hospitals, however excellent some of them may be, are intended primarily for the poor, and are therefore prepared and conducted, in a style necessarily more economical, than the richer classes would willingly pay for, or could enjoy, with advantage. And our pauper lunatics are sufficiently numerous to exclude all others. To accommodate this unfortunate class, we ought tc have public asylums in Indiana, Illinois, Missouri, Arkansas and Mississippi. And beside these we want then another asylum in the west, one of more elegant accommodations than ought to be expected in any State institution. The rich and the luxurious, the refined and the cultivated, are as liable to be bereft of their reason as their less fortunate brethren. There is a manifest propriety in providing for them in their sickness, buildings and comforts somewhat corresponding to what they enjoy in health. And we have no doubt, that an asylum of elegance and convenience, similar to the private institutions in the eastern States, if established near the great navigable thoroughfare of the western country, would soon be filled with patients, and do an immense service to society, and save many valuable citizens from irretrievable loss.

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but not for me." "Then, if it is not good for you it is not good for me. You cannot cheat me to believe your nauseous medicine is nothing but good tea. I'll not touch a drop of it;" and the honest keen maniac spurned it from him. What a commentary upon the attempt to govern insanity by falsehood!

We want a hospital, in the west, to be planned and constructed, furnished and administered, according to the best ideas of the present age. From its very inception to its final operation, nothing should be overlooked or spared, that could directly or indirectly bear upon the comfort or the cure of the insane. Such an asylum should be situated near to the great thoroughfare of the West, near to the Ohio or the Mississippi river, for the convenient access of patients. "The situation chosen should be healthy. It should possess the advantage of a dry cultivated soil, and an ample supply of water; it should be so far in the country as to have an unpolluted atmosphere, a retired and peaceful neighborhood, and yet be so near a town, as to enjoy all the comforts and privileges, and intercourse, which can only be obtained in large communities."* Their daily wants can be better supplied, and the objects of interest can be much more easily and readily varied in the vicinity of a good market-town, than in the midst of a sparse population.

The location should not be a dead flat surface, nor in the midst of tame scenery. But "if the buildings be placed on the summit or the slope of a rising ground, the advantages are incalculable."† "To some the beauty of wood and water, hill and dale, convey grateful impressions." "To all a succession of new, and varied, and healthy impressions must be imparted."‡ There should be a large farm connected with the establishment, both for cultivation, walks, and other means of exercise, and also for the convenient distribution of the buildings. That acute observer of the means and arrangements of various institutions for the treatment of insanity, and their effects upon this disease—Louis Dwight—the Secretary of the Prison Discipline Society, says, there ought to be an acre of ground to a patient.‖ Even twice this quantity would not be too much. For such an asylum as we propose, which would accommodate one hundred and fifty patients,

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* Browne, p. 181. † Ibid. ‡ Ibid. ‖Report, 1841, p. 16.

three hundred acres would be useful for the purposes of agricultural labor, and other exercises, and for the location of the houses, shops, &c., necessary for the establishment.

The architectural arrangement, and distribution of the buildings is of consequence both for the classification and for the facility of management of the patients. The usual, approved plan of the American asylums includes large centre buildings, and wings running from this to the right and left, and backward, proportioned to the wants of the institution. All the offices, dormitories, and other apartments, are under one roof. The asylum at Columbus, Ohio, one of the latest and best, is built upon this plan, and is copied from that excellent institution at Worcester, Mass.*

Esquirol prefers separate and low buildings. He says, that after having devoted ten years to reflection upon this subject; having personally examined all the French asylums, and the plans of many in other countries, and watched the effect of the one under his care, and the Saltpetriere, he has come to the conclusion that a lunatic asylum should not be in a city. But it should be on extensive grounds with an eastern exposure. The land should not be wet, yet well supplied with water. He prefers that there should be a centre building of one story, for the officers and their families. This should include the medical and receiving rooms, and apartments for sitting, eating, sleeping, &c. On the one side of this centre building, and running backward from it in a perpendicular direction, should be placed the houses for the patients. These should be separate structures, and sufficiently numerons for the classification of the patients according to the various kinds and periods of their malady. The maniacs which are furious, and those which are not mischievous; the melancholics who are noisy, and the quiet; the fatuitous, and the filthy; the epileptics, and those with other diseases, and the convalescent—these several classes should each have distinct habitations, entirely separated from each other. These dwellings

*For a full description of this, see former article on this subject.

should be of various styles of architecture, for monotony is wearisome to the lunatic as well as to the sane, and variety in this matter is one means of occupying the attention of the insane. They should be of only one story,* for the greater convenience of watching and serving the patients, and to prevent the danger of accidents incident to upper rooms and stairways, and for the readier access of the inmates to the yard. These houses should be built each with an interior quadrangular court, and include the sleeping-rooms, and the common parlors, eating-rooms, halls, offices, baths, for their respective classes of occupants. These houses will of course be built of material and in manner suited to the patients, that will occupy them. The violent will need strong rooms; the filthy will require paved floors; the suicidal will require padded walls, and the convalescent will enjoy light and genteel parlors as men in health.†

Browne says, "Modern establishments, instead of presenting an interminable succession of wards and corridors under one roof, generally consist of a number of separate houses, in which the patients are distributed according to their dispositions and the features and stage of their disease."‡

Dr. Allen, the proprietor and manager of a private asylum at High Beach, Norfolkshire, England, says—"I would have not only two establishments, but these sufficiently separated so as to prevent annoyance; and not only this separation, but I would have one to consist of a male and female part, sufficiently separated from each other. This arrangement I have, at my own establishments, which consist of Fair-Mead House, and Leopard's Hill Lodge, for males, and Springfield for females, with appendages and separate cottages. With two establishments, we can adopt a better and more complete method of classification."‖ And in all cases the habitations

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*The French asylums are now principally built of one story."—*Browne, p.* 187.

†Esquirol, Des Maladies Mentales, Tom. II, p. 421.

‡Browne, p. 185.

‖On Classification, p. 3.

for "the noisy should be placed at a distance from the quiet patients, so as not to disturb them by their noise."*†

A plan of a very convenient asylum was devised by Dr. Lee and published in the Prison Discipline Society's reports for 1837. This consists of a centre building and many short lateral wings—all parallel with the front, but each retreating so far as to allow its central passage-way to open at each end into the open air.

To build such an asylum, with habitations, separated, isolated, and multiplied according to the kinds and stages of insanity in one hundred and fifty lunatics, would require at least three hundred acres of land. But this is not all. "A hospital building is but one item necessary for the successful management of the insane. In every possible case they should be employed. Riding, amusements, games, walks, and reading, are all useful, and the means for them all should be amply provided. But labor is the very best employment, and the only one that can be long continued without satiety. Provide fields, gardens, and workshops for labor, and a chapel for religious worship on the Sabbath, and you will show to the insane what you consider them capable of doing and enjoying; and they. in return, will show, by their industry, sobriety, and self-

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* Browne, p. 185.

† "Pinel earnestly insists upon the necessity of classifying the insane; of separating those who would be injurious to each other, and putting together such as would be mutually beneficial in their cure. An asylum for lunatics should consist of several establishments, more or less separated from each other. There should be one for each sex. There should be one for the excited, one for the tranquil, one for the convalescent, and one for those who have accidental diseases. It is well to have one division for the filthy, one for the demented, one for the furious, and noisy maniacs, and for such as cannot be controlled, whom we may send there for correction. More than all, it is important to separate the sexes, the convalescents, those who have been of bad morals or obscene in conversation, or licentious in their conduct. Each division should have a court planted with trees, and, as far as possible, a garden for the patients to walk in."—*Georget, Dict. de Medicine, Art. Folie.*

control, that they properly appreciate your confidence, and are grateful for your efforts to promote their happiness."* What these other means of occupation, labor and amusement are, we have described in our account of the best hospitals, in this and the preceding article on this subject.† A chapel, and means for religious exercises, are now found to be among the most important influences for the restoration of the reason. In no condition does the human mind approach its highest perfection so nearly as when in the act of worship of the Father of all Light and Truth.

Having provided liberally and faithfully the material of the asylum, it next behoves us to inquire,—Who should administer these and manage the insane? We have before spoken of the character of the officers and attendants as they are found in the most successful institutions in our country. In those, they are men and women of the healthiest minds, and of the highest mental and moral discipline, and so numerous, that one can give his whole attention to four or five patients, and if the case requires it, he may devote himself exclusively to one; for the grand secret, in the cure of insanity, is the power of sanity over it—the influence of the correct mind and heart over the disordered.

First, the asylum must have a physician for its superintendant, who shall give his entire and undivided attention and companionship to the patients. This is indispensable. Browne says—"The opinion was, and perhaps still is, prevalent, that if a building of suitable dimensions and security were provided, and if medical advisers occasionally saw the inmates, all was done for the insane that could be expected or that could be useful. Every day's experience shows, that these provisions are utterly inadequate to the end proposed—if that end be recovery, and not the confinement of the insane."‡

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*Woodward, Hospital Report, p. 170.

†See this Vol., pp. 456—460. See also Reports of Ohio, Frankford, Bloomingdale, Hartford, Vermont, McLean, and Massachusetts hospitals.

‡Browne, on Insanity, p. 177.

But there must be a physician ever present, and he well qualified for his station. He must be a man of skill, self-devotion and industry. He should be firm and courageous, yet of placid temper, and the gentlest manners. He must have a quick apprehension to discern the disposition and disorder of his patients, and tact to manage them. He must be benevolent towards man, and have a strong love for the particular branch of the profession which he assumes. "The basis of such a character must be dispositions truly Christian," and "there must exist a benevolent kindness, which shall be so deep and expansive, as not merely to feel sympathy for the lunatic because he is an alien to his kind, because he is visited with the heaviest and hardest affliction, which humanity can bear and live, but feel an interest in those unreal, artificial, and self-created miseries, with which the distracted spirit is oppressed. And this kindness will be as solicitous to alleviate suffering, where it is absurd, and the result of violence and perversity of temper, as where it flows from misfortune. There must be a benevolence which will be prepared to make the lunatic a companion and a friend."* The physician must associate with him on terms of reciprocal confidence, and mutual forbearance, of fellow feeling and rational counsel. He must forget, that an awful but not an impassable gulf of obliterated requirements, numbed or lethargic emotions, and darkened reason separates him from the maniac, but regard only the faculties they yet have in common, and make these the ground work of their intercourse. "There must be that benevolence which will imitate the mercy of Him, who in curing the broken and bewildered spirit of the demonom aniac, "took him by the hand and lifted him up." But this gentleness must be controlled. The merely benevolent physician can never be a good practitioner."† Such a one may be too indulgent, and while he is yielding to the tender impulses of his heart, and gratifying the temporary and capricious wants

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*Browne, p. 179. †Ibid.

of his patients, he may be indulging vicious propensities, and encouraging and feeding those very delusions that are the cause of the derangement. "There must be mingled with this sentiment of benevolence that highly refined sense of duty, and that keen perception of right, which guides even kindness and affection in their ministrations, and which holds the balance as scrupulously in deciding on the moral rights of lunatics, as in determining the civil rights of our fellow-citizens."* The curator of the insane must have "that moral and physical courage and firmness, which confer calmness and decision in the midst of danger, and in dealing with the most furious and unlistening madness, and which imbues the whole character with a controlling influence, that, with mercy and justice, governs the turbulent, while it appears to guide them; and commands the most wild and ferocious, by the sternness, and, at the same time, by the serenity of its orders, showing neither timidity nor anger. The intellectual qualifications for such a trust are high and varied. They must comprehend a familiarity with the true and practical philosophy of the human mind, in order that its diseases may be understood and controlled, and a general acquaintance with the usages and workings of society; with the habits, pursuits, opinions and prejudices of different classes; with literature and science, so far as they contribute to the instruction, amusement, or happiness of these classes; with every thing, in short, that can be rendered influential in what may be called adult education, in the management or modification of character, in order that as great a number of moral means of cure, of restraining, persuading, and engaging the darkened and disordered mind, may be created as possible. And finally, there must be as liberal a professional education as long study and observation can accomplish;"† so as to readily understand the causes of insanity, and the influence of the physiological state of the animal system over its duration or intensity, and the power

*Browne, p. 179. †Browne, pp. 178, 179.

of medicine, and of other moral and physical agents over either of these. "Such a physician is not a mere drug exhibiter,"* but he is a man of high principle and benevolence—of philosophy and practical wisdom. To such a man ought the whole establishment to be submitted for his care and faithful administration. This is the case with almost all the American, English, Prussian, Austrian, and many French asylums,† and is found to be best for the management of the insane.‡

Lastly, comes the provision of suitable stewards, officers, attendants, nurses, and servants. What should be the character and number of these, may be learned from the frequent notices and descriptions of them, which we have given in this and the former article,§ when speaking of the most successful assylums. Suffice it here to say—that they should have all the moral qualifications, and many of the mental accomplishments which we deem necessary for the superintending physician. This must, in no case, be overlooked, throughout the whole corps of attendants. From the head, to the lowest cook, sound minds, correct morals, and gentle manners must prevail,‖ and if possible, all of these should be trained to their

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* "To the man who conceives, that he can combat mania with the lancet and tartar emetic alone, or who believes that he can exorcise melancholia with a purge, it would certainly be unpardonable folly to commit the insane."—*Browne p.* 178.

† Esquirol.

‡ "It is absolutely necessary, that the physician be empowered with authority over every person and thing concerned in the peculiar service of the patients."—*Georget, Dict. de Medicine, Art. Folie.*

See also Esquirol, Des Maladies Mentales, Tom. II, p. 526. Des Maisons D' Alienes, §III.

§ Insanity and Insane Asylums, pp. 455, 458.

‖ Consult, Brown on Insanity and Asylums for the Insane, Lecture V. Esquirol, Des. Maladies Mentales, Tom. II. p. 530. Also, Awl's, Earle's, Rockwell's, Bell's, Woodward's, Ray's, Lee's, and Prison Discipline Society's Reports, upon the character of officers and attendants.

Consult the same, and also Good, Prichard, Georget, and Abercrombie, upon the value of labor and amusement, and upon the influence of religious exercises in the treatment of Insanity; and likewise, Dr. Bush's late letter to the commissioners of the Kentucky Lunatic Asylum.

employment, before being entirely trusted with the care or service of the insane.*

With such provisions of lands, buildings, and other materials—with such officers and assistants—with religious service and light and laborious occupation of mind and body—a hospital might be of immense utility in this valley. And surely there is, within this wide reach of territory, and among these five millions of inhabitants, intelligence enough to appreciate such an institution; benevolence enough to desire it, and wealth sufficient to create it and put it into successful operation.†

See Dr. Lee's beau ideal of a perfect asylum. published iu the Eleventh Report of the Prison Discipline Society for 1836, and also his description of his own asylum at Charlestown, in the same.

See a beautiful account of Esquirol's private hospital at Ivry, by Dr. Andrew Combe, published in his treatise on "Physiology, applied to health and Education," Harpers' edition, p. 356.

* In many of the establishments in France, the keepers are required to have undergone a training previous to their appointment—Brown, p. 184. Several about to engage in this service, have resided for some time at York to observe the economy of the house and the management of the patients.—Tuke, Description of the York Retreat, p. 12.

† In addition to the authors and works herein referred to, Dr. Tuke's Description of the York Retreat, Miss Martinean's notice of the Hanwell Asylum, Conolly's, Spurzheim's, and Combe's works on Insanity, some articles in the American Journal of Medical Science, and Dr. Dunglison's pamphlets on the Insane Poor of Pennsylvania, may be well consulted, in corroboraiion of many of the statements and opinions given in this article.

Note.—We are happy to give testimony here to the great improvements of the Kentucky Asylum within the last year, under the faithful care of Dr. Bush. The Report for 1841, is more satisfactory than any that preceded it, and shows a greater success than in any former year. This account is corroborated by other and independent sources of information.

We are informed, that there is no doubt that the Legislature will grant to this asylum all the facilities that its warmest friends desire—a well paid physician, a sufficient corps of attendants, and lands and shops, for the occupation of the patients. When this shall be done, our own asylum will be second to none in the country.

ART. II.—*Notes on the Scarlet Fever, as it appeared in Green County, Ohio.* By JOHN DAWSON, M. D.

The season of '38 was characterized by a general drought, which in this region continued till the spring of '40. It was during this period the scarlet fever supervened. No case had been observed by the physicians for six or eight years previous.

The varieties of the disease, usually referred to by our standard authorities, could scarcely be recognized here. A much more correct division would have been into *simple* and *inflammatory*.

The simple variety was sometimes so slight in its invasion and progress, as scarcely to be noticed, either by the patient or his friends. In most cases no eruption made its appearance, and the fauces seldom required any other attention than a cleansing gargle. When, however, the action of the heart and arteries had become somewhat vehement, and the eruption was developed, when the tonsils and velum palati seemed to be suffering from inflammatory irritation, the disease was more serious, but always yielded readily to the proper treatment.

The *inflammatory* variety did not pass off in this way. Almost invariably it was ushered in with cerebral distress, such as violent pain in the head, or delirium, which, in several cases that come under my observation, produced convulsions that very speedily terminated in death. Its mode of attack differed widely from this in other cases. Vomiting and purging were occasionally the first symptoms of deranged health; sometimes purging alone, Irritation of the heart and arteries predominated in almost every case. Generally, the frequency of the pulse amounted to one hundred and twenty to the minute; and in some cases, it was so great from the commencement as to be indistinguishable. The fauces were the seat of an active inflammation, which involved the parotid glands, together with the muscles and lymphatics on the side of the

neck. The tumefaction resulting from this produced in many cases death by strangulation. In other instances the inflammation extended to the brain or trachea, and hence some of the patients died with the symptoms of *Cephalitis* or *Laryngitis.*

Prognosis.—Generally speaking, the prognosis in the inflammatory variety was bad. Parents who had five or six children sometimes lost half, and others all, in as many days. In most instances where I observed recovery to take place, the individuals had been attacked with vomiting in the commencement. But if this was accompanied with purging, the patient invariably died. Purging by itself was little less fatal.

Treatment.—In the simple variety, this has already been anticipated. I believe such cases will get well under any plan of treatment. It is in the inflammatory form of the disease that we have the *opprobrium medicorum.* Here I had some cases in which I witnessed the inefficiency of every plan of treatment. I might relate a case in which the patient seemed literally inflamed from head to foot. The disease run its course, and terminated fatally, notwithstanding the employment of a bold and vigorous practice. Cases like this produced skepticism in the minds of some physicians relative to our power of controlling this disease in any form. But unwilling to subscribe to this sentiment, I will briefly relate the means which I believe saved some from an untimely grave. Of these, blood-letting was among the most efficient. This remedy was most valuable when the blood was suffered to flow in a full stream from a large orifice, until there was a decided impression made on the action of the heart and arteries. In some cases, this had to be repeated several times before the momentum of the circulation was completely controlled,

Next in importance to blood-letting, was the application of cold water to the skin. Nothing contributed more to lessen the exalted temperature, abate the febrile orgasm, and arrest the inflammatory diathesis of the whole system, than the application of cold water to the surface.

The water was most successfully applied by sponging and ablutions. We commenced with it at a temperature but little below that of the skin, and gradually diminished it until all the therapeutic effects of the remedy were obtained. *Purgatives* seemed to fulfil no other indication than just to keep open the first passages. Carried farther than this, they invariably did harm. But for accomplishing this object, calomel, from its soothing influence upon the irritated mucous surface of the bowels, was found to be the best. *Diaphoretics* did no good, except in the declension of the disease. *Capsicum*, so much lauded by some writers, was prejudicial, when administered internally—tending to increase the already over-excited condition of the system. Emollient cataplasms to the side of the neck, when the latter was much tumified, seemed to answer much better than blisters. They were always required, and seldom failed to mitigate the sufferings of the patient.

This is a condensed history of scarlatina, as it made its appearance with us. But I am informed by physicians from various parts of the state, that its violence and the mortality it occasioned in different regions were by no means uniform. In some places, it was similar to what it was here, whilst in others, it was altogether mild, requiring but little if any attention from the physician.

REVIEWS.

ART. III.—*The Philosophy of Storms.* By JAMES P. ESPY, A. M., Member of the American Philosophical Society, and Corresponding Member of the National Institution, Washington. Boston: Charles C. Little & James Brown. 1841. pp. 552.

METEOROLOGY is a subject towards which no one can feel an entire indifference. So much and so constantly is our comfort affected by the weather, that all persons are concerned in understanding the laws which regulate its changes. In the work before us, Mr. Espy treats at great length, and, in our judgment, with great ability, of some of the meteors which have awakened among men the most general and absorbing interest. His theory of storms has been before the public for a number of years, and has attracted the attention of scientific men as well in Europe as in our own country. By some it has been favorably received, and by others it has been rejected; so that much high authority might be cited both for and against the doctrine. We have said that the subject appears to us to have been handled with great ability, by which we do not wish to be understood as expressing our full assent to the truth of the theory, but as saying that the author has fortified it by a powerful array of facts and arguments. We are free to go farther and declare, that no other theory extant, appears to us to account so satisfactorily for the phenomena of storms. Mr. Espy's work consists of tracts prepared at different periods, and designed for separate publication, each containing a synopsis of the views of the author; in consequence of which much repetition occurs, and the volume has been swelled to a size which will deter many readers

from such an examination as is necessary to doing the theory justice. We propose, therefore, for the satisfaction of such of our readers as may lack the opportunity or leisure for consulting the work, to present in this article an outline of Mr. Espy's philosophy of storms, in maturing which, he informs us, he has been engaged now about thirteen years—his attention having been called to the subject by Dr. Dalton's experiments on the aqueous vapor which exists in the atmosphere. "I was struck," he says, "with one of his results, namely, that the quantity of vapor in weight, existing at any time in a given space, could be determined with great accuracy in a few minutes, by means of a thermometer and a tumbler of water cold enough to condense on its outside a portion of the vapor in the air. It occurred to me at once, that this was the lever by which the meteorologist was to move the world."

This aqueous vapor, which is only five-eights of the specific gravity of atmospheric air, forms a restless and variable constituent of it, as it has been recently deposited in rain, or has been accumulating long in time of drought. When the air near the surface of the earth becomes more heated, or more highly charged with aqueous vapor, its equilibrium is disturbed and up-moving columns or streams will be formed. As they ascend, the upper parts of these columns coming under less pressure, will expand, the air of which they consist spreading out and assuming a mushroom shape. The air thus expanding, according to a well known law of caloric, will grow colder, at the rate of about one degree and a quarter for every hundred yards of its ascent. This decline in its temperature will necessarily be attended with the condensation of its aqueous vapor, or the formation of cloud. Mr. Espy illustrates this by an instrument which he calls a Nephelescope, in which a cloud of condensed vapor is formed in a glass bottle, the air of which, having been compressed by a syringe, is suddenly relieved of its pressure, and expands to its natural volume. The vapor contained in the air is condensed, as we see it, by the first strokes of the air-pump in a

glass receiver, by the cold of diminished pressure; and the mercurial column appended to the nephelescope, shows that the condensation of this vapor is attended with an evolution of heat.

"The distance or height to which the air will have to ascend before it will become cold enough to begin to form cloud, is a variable quantity, depending on the number of degrees which the dew-point is below the temperature of the air; and this height may be known at any time by observing how many degrees a thin metallic tumbler of water must be cooled down below the temperature of the air before the vapor begins to condense on the outside. The highest temperature at which it will condense, which is variable, accordingly as there is more or less vapor in the air, is called the "dew-point," and the difference between the dew-point and the temperature of the air in degrees, is called the complement of the dew-point."

A warm air coming up from the south, after a severe frost in winter has its moisture condensed into fog by the cold earth. If it be cooled 20° below the dew-point, it will lose about one half of its vapor by condensation, and at 40° below, it will condense three-fourths of its vapor into water. The cold produced from the expansion of the up-moving columns will not, however, be followed by exactly these results; for the vapor itself growing thinner under the diminished pressure, the dew-point falls about one-quarter of a degree for every hundred yards of ascent.

"It follows, then, as the temperature of the air sinks about one degree and a quarter for every hundred yards of ascent, and the dew-point sinks about a quarter of a degree, that as soon as the column rises as many hundred yards as the complement of the dew-point contains degrees of Fahrenheit, cloud will begin to form; or, in other words, the bases of all clouds forming by the cold of diminished pressure from up-moving columns of air, will be about as many hundred yards high as the dew-point is below the temperature of the air at the time. If the temperature of the ascending column should be 10° above that of the air through which it passes, and should rise to the height of 4,800 feet before it begins to form cloud, the whole column would then be one hundred feet of air lighter than surrounding columns; and if the column

should be very narrow, its velocity of upward motion would follow the laws of spouting fluids, which would be eight times the square root of one hundred feet a second; that is, eighty feet a second, and the barometer in the centre of the column at its base would fall about the ninth of an inch."

The rate of cooling is slower after the cloud begins to form, and proceeds only half as rapidly above the base of the cloud as below it. The air growing colder one degree for every hundred yards of ascent, the air in the cloud above its base loses but five-eights of a degree for every hundred yards in height; and hence, if the cloud be of great perpendicular height, its summit must be much warmer, and consequently much lighter, than the surrounding atmosphere. Gay Lussac found this to be the fact—his thermometer rising when he passed out of the clear sunshine into a cloud. The heating effect of condensation is still greater when the change is from vapor to hail or snow. With the evolution of heat by this change, the ascending column is expanded, taking the shape already adverted to; and immediately under the cloud the barometer, consequently, will fall; whilst it will rise above the mean under the annulus formed by the outspreading of the air in the top of the cloud. The air which thus raises the mercury in the barometer must, from its greater weight, sink downwards and increase the velocity of the wind at the surface of the earth, towards the centre of the ascending column. The up-moving current of air, is consequently, supplied by the air within the annulus, and that which descends within the annulus itself.

"When up-moving currents are formed by superior heat, clouds will more frequently begin to form in the morning, increase in number as the heat increases, and cease altogether in the evening, when the surface of the earth becomes cold by radiation."

The wind increases with the increase of these columns, both keeping pace with the increasing temperature.

The circumstances under which rain is not likely to occur, are detailed in the following paragraph:

"When the complement of the dew-point is very great, (29° and more,) clouds can scarcely form; for up-moving columns will generally either come to an equilibrium with the surrounding air, or be dispersed before they rise twenty hundred yards, which they must do, in this case, before they form clouds. Sometimes, however, masses of air will rise high enough to form clouds; but they are generally detached from any moving column underneath, and cannot form cumuli with flat bases; such clouds will be seen to dissolve as soon as they form, and even while forming they will generally appear ragged, thin, and irregular. Moreover, if the ground should be colder during the day than the air in contact with it, as it sometimes happens after a dry cold spell of weather, then, as the air touching the cold earth will be colder than the stratum above it, ascending columns cannot exist, and of course no cumuli can be formed on that day, even though the air may be saturated with vapor to such a degree as to condense a portion of it on cold bodies at the surface of the earth. Also, if during the whole winter, any part of Siberia or the northern part of North America, should be so much colder than surrounding regions, that no up-moving columns could be produced, then neither clouds nor snow could be formed. Neither can clouds form of any very great size when there are cross currents of air sufficiently strong to break in two an ascending current; for the ascensional power of the up-moving current will thus be weakened and destroyed. Immediately after a great rain, too, when the upper air has yet in it a large quantity of caloric, which it received from the condensation of the vapor, the up-moving columns which may then occur, on reaching this upper stratum, will not continue their motion in it far, from the want of buoyancy; therefore, they will not produce rain, nor clouds of any kind but broken cumuli. Besides, the air at some distance above the surface of the earth, and below the base of the cloud, is sometimes very dry, and as much of this air goes in below the base of the cloud and up with the ascending column, large portions of the air in the cloud may thus not be saturated with vapor, and, of course, rain in this case will not be produced. These are some of the means contrived by nature to prevent up-moving columns from increasing until rain would follow. Without some such contrivances, it is probable that every up-moving column which should begin to form cloud when the dew-point is favorable, would produce rain; for as soon as cloud forms, the up-moving power is rapidly increased by the evolution of the caloric of elasticity."

On the leeward side of very lofty mountains it is known that rain never falls, and we have an explanation of the fact in the extract just presented. The air on the windward side as it rises up the brow of the mountains, loses its vapor by condensation; or even if enough moisture remain to form clouds, these, as they begin to descend the leeward slope, coming under greater pressure, are dissolved by the heat thus produced.

We come now to our author's philosophy of the tornado and water-spout.

"If the air is very hot below, with a high dew-point, and no cross currents of air above to a great height, then, when an up-moving current is once formed, it will go on and increase in violence as it acquires perpendicular elevation, especially after the cloud begins to form. At first, the base of the cloud will be flat; but after the cloud becomes of great perpendicular diameter, and the barometer begins to fall considerably, as it will do, from the specific levity of the air in the cloud, then the air will not have to rise so far as it did at the moment when the cloud began to form, before it reaches high enough to form cloud from the cold of diminished pressure. The cloud will now be convex below, and its parts will be seen spreading outwards in all directions, especially on that side towards which the upper current is moving, assuming something of the shape of a mushroom. In the meantime, the action of the in-moving current below, and up-moving current in the middle, will become very violent, and if the barometer falls two inches, under the centre of the cloud, the air, on coming in under the cloud, will cool by diminished pressure about 10°, and the base of the cloud will reach the earth, if the dew-point was only 8° below the temperature of the air at the time the cloud began to form. The shape of the cloud will now be that of an inverted cone, with its apex on the ground, and when a little more prolonged and fully developed, it will be what is called a tornado, if it is on land, and a water-spout if at sea."

In proof of these positions the author refers to the appearances presented along the path of a tornado, where the trees and other objects will show that the wind blew from all points towards the centre of the path. The trees on the extreme borders will all be found prostrated with their tops inwards,

either inwards and backwards, or inwards and forwards, or exactly transverse to the path of the tornado. The trees in the centre of the path will be thrown either backwards or forwards, or parallel to the track; "and invariably if one tree lies across another, the one which is thrown backwards is underneath." Materials will be carried across the path, those which were on the right hand making a curve from left to right, and those on the left hand from right to left. The limbs of trees near the borders of the path are found twisted round the trees, and broken in such a manner as to remain twisted, those on the right side of the path from left to right, and those on the opposite side from right to left. The limbs only that grew on the side of the tree most distant from the track of the tornado, are broken, as they alone are subjected to the cross-strain.

While the inmoving currents are driving all objects towards the path of the tornado, in the centre of the path bodies are exposed to a different action. The air at that point, suddenly relieved of its accustomed pressure, expands with instant and immense force. Houses will be either wholly exploded, by the expanding air, their walls being prostrated outwards, or else have their roofs blown up, and those most nearly air-tight will be most subject to demolition. Doors and windows will be blown out, floors from cellars will be blown up, and bureaus and corks of empty bottles exploded. The thin sealed bottle under the exhausted receiver, shivered into fragments by the expansive force of the confiined air, beautifully illustrates this principle, and the history of the tornado at Natchez, which we refer to as one of the most recent, is full of evidences of the truth of it. Mr. Espy relates a multitude of such instances, and has, to our mind, fully established this part of his theory.

"All round the tornado, at a short distance, probably not more than three or four hundred yards, there will be a dead calm, on account of the annulus formed by the rapid efflux of the air above, from the centre of the upmoving and expanding column."

In this calm atmosphere the barometer stands above the mean, showing a depression of the atmosphere at that point. Beyond the annulus a gentle wind blows from the tornado, and hence all the air which feeds it must be supplied from within the annulus. Light bodies, such as shingles, branches of trees, and drops of rain, must be carried to a great height by these ascending columns; "for though they may frequently be thrown outwards above, and then descend to a considerable distance at the side they will meet with an inblowing current below, which will force them back to the upmoving current, and so they will be carried aloft again." In this manner hail will be formed, and we have no where met with so satisfactory an explanation of this meteor. The rain carried into the region of perpetual frost will be congealed, especially if it be thrown out above so far as to fall into clear air, which, in some instances, is from 30° to 40° colder than the air in the cloud. The hail from a column of air ascending perpendicularly, will be thrown out on both sides of the tornado's path, sloping inwards as it falls, and on examination it will be found that two veins of hail fall simultaneously, at no great distance apart. This hail will frequently be found to contain particles of matter, carried up from the surface of the earth with the ascending column of air; and in cases of violent action sheets of water will be raised above the snow line, where they will form cakes of ice, and descending, will break into every variety of shape.

"In the Orkney spout of the 24th July, 1818, instead of hail-stones of the usual shape, pieces of ice, of almost all forms, were precipitated with the utmost violence. Mr. Caithness attempted to wade out among the hail-stones in the direction of the cattle, but the loose ice, he says, slipped below his feet, and sometimes reached his knees. In this way his legs were so much cut by its sharp edges, that he was soon obliged to desist.

The barometer fell from 29.68 to 27.76, on the passage of the spout; or perhaps more, as the minimum may not have been observed; for it did not occur to Mr. Lindsay to note the barometer till the cloud was passing off; sixty geese in one flock were killed, and all the rest so hurt that they soon died:

and the milch cows "were struck yeld," or gave no more milk, and indeed would not suffer the people to attempt to milk them any more."

In all violent thunder-storms in which hail falls, our author maintains that the drops of rain are carried by the ascending air into the region of eternal ice, and we think with him, that "it is difficult, if not impossible, to conceive any other way in which hail can be formed in the summer, or in the torrid zone."

The author copies a chart from the memoirs of the French Academy, representing two veins of hail which fell simultaneously not more than eight minutes at any one place, travelling from the Pyrenees to the Baltic, with a velocity of about 50 miles an hour. Between the veins of hail rain fell throughout the whole extent of the storm.

"In those countries in which an upper current of air prevails in a particular direction, the tornadoes and water spouts will generally move in the same direction, because the upmoving column of air in this meteor rises far into this upper current, and of course its upper part will be pressed in this direction, and as the great tornado cloud moves on in the direction of the upper current, the air at the surface of the earth will be pressed up into it by the superior weight of the surrounding air. It is for this reason that the tornado in Pennsylvania generally moves toward the eastward."

As air cannot move upwards without coming under diminished pressure, and as it must thus grow cooler by its expansion, and thus give rise to cloud, any cause which produces an upward vortex of air, whether it be a volcano or a great conflagration, will induce rain, provided the complement of the dew-point be small, the air calm below and above, and the upper part of the atmosphere of its ordinary temperature. Mr. Espy remarks,

"Let all these favorable circumstances be watched for in time of drought (and they can only occur then,) and let the experiment be tried."

The experiment is to kindle a conflagration, in which the warm air by ascending will grow cold, and condensing its vapor, induce rain. If the experiment should succeed, and

we should thus be put in possession of a practicable mode of averting tornadoes and bringing on rain in times of drought, we agree with our author, that "the result would be highly beneficial to mankind." The experiment may not be successful, or if so, it may prove too expensive to be resorted to as an ordinary expedient; but this would not affect the truth of Mr. Espy's theory, which, although objections may be urged against it, has the merit of being simple and ingenious, and of accounting more satisfactorily than any other proposed, for the phenomena of storms. It does not take into account the action of electricity in these meteors, and in this respect the author himself admits that his theory is incomplete. When completed, as he proposes, by the study of the influence of electricity, we think, with the Committee of the French Academy of Science, "he will leave nothing to be desired," in this department of philosophy. Y.

Bibliographical Notices.

Art. IV.—*The Guardian of Health; a monthly Journal of Domestic Hygiene.*

This is the title of a new periodical commenced at Baltimore in September last, and of which the first, second, and third numbers have been published. It is under the editorial charge of Thomas E. Bond, Jr. M. D., and Chapin A. Harris, M. D. The design of the publication is made known in a very well written prospectus, from which we make the following quotations.

"The Guardian of Health is not intended, and will not be calculated, to supersede the physician. Its object will be to prevent disease and suffering by such precautionary information as may appear necessary. It will aid the mother in the performance of her proper duties as guardian of her children's health—it will aim to make her a skilful nurse, and a judicious, firm, and tender assistant to the physician in the management of disease."

* * * * * *

"The care of the teeth and the teething infant is a matter of very great importance. Parents are not aware how often death in dentition, or the ill health of subsequent life, is the result of improper management during the first months of infancy, nor do they suspect the great instrumentality which imperfect development, or serious disorders of the organs of the mouth, exert in the production of depraved and debilitated constitutions. Mothers to whom the care of these things almost exclusively belong are necessarily ignorant about them. But little effort has been made to afford them infor-

mation, and even when alive to the subject, they do not know where to obtain the necessary knowledge.

It is hoped that the journal now proposed will supply this important aid. A portion of it will be regularly devoted to information upon the hygiene of dentition, and the care of the teeth and their appendages."

One thing is adverted to in this prospectus that cannot have escaped the notice of our readers: we allude to the great number of deaths among children, as shown by our bills of mortality. The fact is beyond all question. We happen to have before us, at this moment, the "Interments in the City and Liberties of Philadelphia, from the 4th to the 18th of December, 1841." The whole number is 188, of which 90, or almost one-half, are children. This is indeed painful, and in the language of the editors, "no experienced physician can doubt that much of this premature mortality, with its fearful train of domestic misery, is unnecessary."

Undoubtedly, much of it is owing to a want of energy in the treatment of the diseases incident to childhood. The practice is too often an *expectant* one. Physicians are frequently heard to remark that they "do not like to give medicine to children." Of course not; but it would be much more harmless, and quite as true, to say, that "children do not like to take medicine." This, besides, would have the advantage of not affording to parents and nurses any pretext or countenance for delay in seeking advice, and for tampering with disease until it is beyond remedy. Rush's great maxim to "oppose the beginnings of disease," if valuable at all, is peculiarly so in the management of children, and it should ever be kept in mind.

The objects of the "Guardian" are certainly praiseworthy, and we accordingly give the enterprise our best wishes.

C.

ART. V.—*A Report of the Facts and Circumstances relating to a case of Compound Fracture and Prosecution for Mal-Practice, in which William Smith was Plaintiff, and Drs. Goodyear and Hyde Defendants, at Cortland Village, Cortland County, N. Y. March* 1841: *Comprising statements of the case by several medical gentlemen, together with Notes and Comments on the Testimony.* By A. B. SHIPMAN, M. D. Cortlandville, 1841. pp. 35.

The following extracts from the history of this case, as given by Dr. Shipman in the pamphlet, will put the readers of the Journal in possession of the principal matters involved.

"On the 4th of July, 1839, Wm. Smith fell from a building in consequence of the staging giving way, and fractured his leg. I was called upon to visit him, and arrived about two hours after the accident—found both bones broken, tibia two inches above the ankle joint, fibula 4 inches. The end of the tibia protruded through a laceration in the soft parts on the inside of the leg, 4 inches long, constituting what is called in surgery a compound fracture. None of the important blood vessels or nerves were injured. The fractured end of the tibia which protruded was transverse on the inside, and a small portion of its diameter on its outside, or next the fibula, was detached, and had fallen out. The extreme end of the bone was denuded of its periosteum, perhaps one fourth of an inch. One small spicula of loose bone was removed from the wound with the fingers. No dirt or foreign bodies were in the wound, nor was there any considerable hemorrhage. After sponging the wound, extension and counter extension was made, and the bones placed in apposition. Narrow strips of adhesive plaster, bringing the wound accurately together, were applied—Scultetus' bandage, and two long splints well padded, reaching above the knee and below the ankle, with another short splint along the front of the leg—these were secured by strong tapes, and the leg extended upon a pillow, with directions to keep it constantly wet with cold spirits and water. An anodyne of sulphate of morphine was administered, and I left him. The patient was about 50 years of age, of a strong and robust constitution, but addicted to intemperance."

On the following day, July 5th, Mr. Smith was removed to the Alms-House. Dr. Shipman's attendance then ceased, and

he heard no more of the case until the thirteenth, when he was requested to repair to the Alms-House to assist in amputating Smith's leg, Drs. Goodyear and Hyde, the medical officers of the establishment, having given it as their opinion that this must be done immediately.

"On arriving at the Alms House, Drs. Goodyear and Hyde were there with some others, and we were soon joined by Dr. Lewis Riggs, G. W. Bradford, and Joel R. Carpenter—Wm. J. Wilson, Benton and Maybury, Medical students, were also present. Two of the Superintendents, Messrs. Coye and Allen, were there and present at the consultation. After examining the limb, the medical gentlemen retired to a private room for consultation. Instead of proceeding to amputate the limb, as the nature of the summons had prepared us to expect, the question arose as to the propriety of amputating at all. The patient at this time was in the following condition:—His leg lay over the double inclined plane, the bone protruding through the wound nearly two inches: it was dry and dark, and had lost its vitality—the foot was turned off and the leg distorted, with retraction of the muscles and shortening of the limb; the leg was swollen and inflamed nearly to the knee; the wound gaped, but there was no loss of substance; upper part of the wound had healed, and healthy granulations covered a portion of the bone; some pus of good quality issued from beneath the bone. The patient suffered much pain, yet was free from fever; appetite, strength, and pulse good; tongue clean, and bowels regular. Drs. Goodyear and Hyde urged the necessity of immediate ampuation. The reasons they assigned, were, the age, habits, constitution of the patient, state of the weather, and apprehensions of fever. Dr. Bradford thought it a case in which the propriety of amputation might be *"talked of."* Drs. Riggs, Carpenter, and myself, saw no reasons why amputation was required: there were neither local nor constitutional symptoms which demanded it."

* * * * * *

"I advised the removal of the dead portion of bone with the saw, which offered an obstacle to the reduction of the fracture, placing the bones in apposition, and applying appropriate dressings; that it was important that the fractured ends of the fibula be placed in apposition, that it might unite, which would serve to keep the limb steady until union of the other bone had taken place—to give such constitutional

remedies as the case required. and I was confident the leg might be saved without endangering the life of the patient."

* * * "The defendants did not relish this advice; they urged the necessity of immediate amputation, for fear, as they expressed it, *"that a fever might set in and carry the patient off"—that the age, habits of the patient, and state of the weather*, were other reasons why amputation should be performed. I knew of no authority in Surgery where age, habits, state of the weather, and *apprehensions of fever* were sufficient reasons for removing a limb. Drs. Riggs and Carpenter coincided with me in opinion, advised the removal of the bone, and dressing with splints. Late in the afternoon I returned home. I saw no more of the case until the 23d of July, ten days after the consultation. On Sunday the 22d, a messenger came to my house and informed me that the Superintendents of the Poor had given Smith liberty to choose his surgeon, and he had sent for me. Monday morning 23d, I met Dr. Carpenter at the Alms House. Found the patient in nearly the same condition as on the day of consultation—the limb rather more distorted; bone still protruding. The heel was very sore from pressure upon the inclined plane, and had sloughed to the bone. *The same kind of dressing, a loose cloth, was upon the limb.* He complained of much pain in his heel and leg, especially on motion or a jar of his bed. With the assistance of Dr. Carpenter I proceeded to remove the end of the bone. A retractor was placed under it, and the lower end held by a pair of strong forceps, and the leg supported by an assistant—about an inch of the end was removed by the amputating saw, including that which had lost its vitality. After the removal of the bone, the limb was placed in an easy position and left. At the Alms House I learned, that Dr. Patterson, of Homer, had been also requested to assist in taking charge of the patient, and we concluded to defer the application of splints until the next day. July 24th met Drs. Patterson and Carpenter; applied the proper dressings; cleaned the wound from pus and maggots; brought the edges as near together as possible with adhesive plaster; removed the double inclined plane; applied splints; dressed the heel; placed the limb upon a pillow in the straight position; ordered him quinine, stimulants and anodynes. From this time Drs. Patterson, Carpenter, or myself, saw him daily and dressed the wound, keeping it clean and the bone in place. The wound kept on healing and contracting steadily and progressively, without any bad symptoms ensuing, until union took place, first in the fibula,

which served to keep the leg steady without trouble; the tibia next united, and the patient left his bed and went upon crutches. He remained in the Alms House during the winter, but left in the spring and engaged in labor. His leg has become strong, and he walks without difficulty and without much lameness."

In February 1841, a suit was instituted by Mr. Smith against Drs. Goodyear and Hyde for mal-practice, and the trial came on in March following. To support the prosecution, he introduced as witnesses Messrs. Brockway and Rose, Drs. Shipman, Riggs, Patterson and Carpenter, Mr. Allen, Superintendant of the Poor, and Baker, nurse at the Alms-House. The statement of the case given above, is in accordance with the testimony of these persons. The defendants, on the other hand, endeavored to show that they had treated the case faithfully and correctly, that amputation of the leg would have been proper, and, collaterally, that the excision of the dead portion of bone, as advised and performed by Dr. Shipman and others, was censurable. To this end they adduced the evidence of Drs. Bradford, Webster (late Professor of Surgery, and now of Anatomy, in Geneva Medical College), Hamilton (Professor of Surgery in Geneva College, and likewise in two or three other colleges we believe), Hawley Maybury, Benton, Webster, Burdick and Smith, and that of Mr. Seymour, keeper of the poor-house. After the examination of the witnesses for both parties, the suit was withdrawn by the plaintiff's counsel.

In the treatment of the case, the reader would at once suppose there had been culpable negligence on the part of the medical officers of the poor-house, did they not take pains to show that they visited the patient "day after day," and that the limb was regularly dressed by them. At the same time it is not attempted to be concealed, that the fragments passed each other; that "one end of the bone stuck out through the hole (in the soft parts) shortly after the first dressing, and remained so till the council and so after, till Shipman dressed it;" and that the foot lay off at an angle of ten or twelve degrees. It reduces itself then to culpable igorance; and that

any professional man, much less a professor of surgery and a professor of anatomy in a reputable school, could be found to approve such treatment, passes our understanding. Nothing *could* be proper that would allow such a state of things to exist, in a transverse fracture of the leg, for 19 or 20 days! Argument is useless; the bare fact is sufficient.

Neither is argument necessary in reference to the question of amputation. How such a design could have been for a moment entertained, we cannot possibly conceive. The local symptoms could not justify it: there was some pain, and the bone had lost its vitality for the space of an inch; but the discharge from the wound was healthy, and granulations had formed over a portion of its surface. The constitutional symptoms did not call for it; on the contrary, the general health was not much deranged: there was no loss of appetite, the tongue was clean, the bowels in good condition; the strength was well-sustained, and the pulse was good. Are men's limbs to be sacrificed to "*apprehensions* of fever?" The idea is ridiculous. In the absence of every other motive, one might almost suppose that amputation was desired to get rid of a troublesome case, and the more effectually to conceal a bad piece of surgery.

The removal of the necrosed portion of bone was clearly the most obvious remedy; and we think any one who reads the statement of the case given above, must assent to its propriety. It could be effected without any difficulty. Nature, in fact, which is so frequently mentioned by defendant's witnesses, seems to have pointed out this very course. There was the extremity of the tibia, as it were offering itself to the saw! there were healthy granulations, both on the upper and lower part of the wound—in the latter point concealing the lower fragment—all showing conclusively that nature, with a little assistance, was ready and competent to repair the injury! To have waited for exfoliation, as was proposed, would have doomed the patient to incalculable pain and a long confinement; whilst the severe local irritation, combined with the profuse discharge attending the process, reacting on the

constitution, would in all probability have finally rendered amputation necessary.*

A portion of the pamphlet is devoted to remarks and animadversions on the testimony of some of the defendant's witnesses. This testimony, to which we have already alluded incidentally, certainly exhibits some curious matters. That of Professor Webster strikes us as being of a most singular character. We quote some passages: "In this case the amount of irritation would have prevented me from any effort to this effect," viz. cutting off the protruded bone. "I should have adjusted the bones and reduced irritation, and watched the period when nature was incompetent to do her duty, then I might be disposed to amputate." . . . "Taking every thing into consideration, I should have decided on amputation." "It is of no importance that the foot fell over because the bones could not unite in such a case." . . . "I do not know of any thing wrong in this case." "It is not good practice to allow a fracture to get out of place—it indicates want of skill." It is to be expected that there will be contradiction in the testimony adduced by opposite parties, but it is certainly unusual for a witness thus to contradict in one breath what he has said in another.

Not less obnoxious is the evidence of Professor Hamilton. He commences with the assertion, that "the man stands an *equal chance* of losing his limb," although there was a perfect bony union, and the leg had entirely recovered, save a small sinus which continued to discharge! No doubt there would have been quite as much propriety in removing it then, as there was at the time of the consultation. He goes on to say: "The probable cause of the death of the bone, was the injury the periosteum received: the mere inflammation of the periosteum will cause the bone to die." . . . "If the external cover-

* Or another result might have been the formation of callus, fixing the bones in their unnatural position. The reader will find under the head of "Selections," in this number of the Journal, a case, similar in many respects to Smith's, in which this termination occurred, requiring subsequently a painful and tedious operation to correct the deformity.

ing was off, the bone must exfoliate." "As to the cutting off the bone, there was but one circumstance under which it was proper, and that is where we suppose or presume that the living parts are dying by lying in contact with the dead; the rule is the same as to amputation." . . . "As to moving the foot, if I understand the testimony, it did not matter a straw." . . . . "After the first dressing, I could not have treated the case better than defendants did." It is greatly to be feared that the multiplied duties of this gentleman (we have already said he was Professor of Surgery in four different medical schools) have prevented him from keeping pace with the progress of surgical knowledge. If such be the doctrines taught by him and his colleague (Professor Webster), suits for mal-practice will excite no wonder in that section of country, nor, for that matter, would suits for *mal-teaching*.

After perusing statements like the above from men whose position and opportunities have given them every advantage, the reader will be less surprised at the following from those whose sphere of observation has been more confined, and some of whom in all likelihood received their medical education at the hands of the gentleman above-named. Dr. Hawley testifies very sagely as follows: "The turning off the foot and projection of the bone made but little difference for the first two or three weeks, until ossific union began." "In the case in question, should not have hesitated to amputate; at the time of consultation should have amputated." . . . . "I know of no authority that would warrant the cutting off the bone in this case, at the time." . . . "Have seen the limb; not certain but it will be amputated yet!" Another witness held forth in this wise: "It was no serious injury for twenty days to allow the bone to get out of place." "As to cutting the bone off the time it was done, should suppose it would be an injury to it; the result does not prove it good practice at all." "In this case the limb is not better than a wooden one." And another, as if to go beyond all who had preceded him, affirms that it was "not material to keep the bones in apposition at all; as to the fibula, not material; confining it would

have tended to mortification;" and that "the result proves that amputation would have been right!"

The perusal of this "Report" has given us a favorable impression both of the talents and professional skill of the author. Its publication seems to have been a measure of self-defence merely, and to have been reluctantly undertaken. Soon after the trial, the most gross mis-statements of the case were published and distributed among the adjoining counties, and rumors were circulated in every direction, prejudicial to the character of Dr. Shipman, and of the professional gentleman associated with him in the treatment. In commenting on the testimony of some of the witnesses for the defence, he speaks as any man would who felt himself unjustly censured, though, we confess, in much milder terms than we should have spoken under similar circumstances. The result of the case must be peculiarly gratifying to him, at the same time that it is a triumphant refutation of all the slander and falsehood of which he has been the subject. At the date of the publication, the leg was free from ulcer or discharge of any kind, and in all respects nearly as serviceable as the other. C.

Selections from American and Foreign Journals.

Case of Deformed Leg, from unsuccessfully treated Fracture, cured by an operation performed by John Rhea Barton, M. D.—Reported by W. S. W. Ruschenberger, M. D., U. S. Navy.—About half past seven o'clock, P. M., on the 18th of December, 1838, while in charge of the deck of the U. S. Ship Ohio, then at sea, Lieutenant —— fell from the horse block, about four feet high. The weather being cold and boisterous, he was heavily clothed in a pea-jacket, &c. His feet became engaged in a coil of rigging on the deck, while the body was carried forward, and the right tibia was fractured transversely at about its lower third, and the fibula at about two and a half inches above the ankle.

A gale of wind, then commencing, lasted several days.

He was placed in his apartment on the orlop deck, where the circulation of air was very much interrupted, and probably much vitiated by the number of persons breathing it.

The limb was set by the surgeon. He suffered very much from the motion of the ship, and in the night was attacked with severe spasms in the limb; and he distinctly felt the fragments slip upon each other.

On the 5th of January, 1839, the ship arrived at Mahon, and on the following day, the nineteenth after the accident, the patient was moved on shore. During the transportation from the ship, he suffered great pain from the moving of the ends of the broken bones on each other.

He remained in bed eight weeks, and when he got up, the limb was still flexible at the point of fracture. Getting out of bed was at first very painful, and usually occupied fifteen minutes.

When he got up he was urged to exercise the limb, and three or four weeks afterwards, to bear his weight, in a degree, upon it.

In consequence of the accident, and its unsuccessful treatment, the upper fragment of the tibia rides the lower one,

overlapping it about half an inch, forming an obtuse angle which presents inwards. The limb is shortened a half inch; there is a concavity inwards, on the outside of the leg, as might be the case if the fibula were pressed inwards against the tibia at its lower third; the flexor muscles are thrown out of their normal line of action, and the external condyle of the femur seems to be, in a measure, alone in the essential constitution of the knee-joint, the internal ligaments being elongated, and the knee thrown inwards.

The patient suffers no pain; and the only inconvenience complained of is, that his foottng is not certain when at sea, and that he suffers under pain and weakness in the knee, on taking unusual exercise on shore.

For the purpose of removing this inconvenience, and correcting the deformity, the patient came to Philadelphia; and after having been carefully examined at different times, and at considerable intervals, by Doctors Thomas Harris, W. E. Horner, J. Randolph, W. S. W. Ruschenberger, J. Rhea Barton, and Paul B. Goddard, anxiously submitted to an operation.

Lieutenant ——— is a native of South Carolina; he is thirty-four years of age, about five feet eight inches high, of nervous sanguine temperament, light eyes, ruddy complexion, and, with the exception of an attack of fever on the coast of Africa, in 1824, has enjoyed uninterrupted health. He does not use tobacco in any form.

For a month he has regulated his diet with a view to the operation, eating moderately of meat once a day.

Having procured an airy, comfortable apartment, and made the necessary preparations, he submitted to the following operation, performed by J. Rhea Barton, assisted by Doctors Norris, E. Peace, Paul B. Goddard, W. P. C. Barton, and Ruschenberger.

October 18th, 1841. Weather clear and cool. Ten minutes before commencing the operation the patient swallowed thirty-five drops of laudanum. He was placed upon the table at twelve o'clock.

Two incisions, three inches in length, were made over and parallel with the internal and external margins of the tibia, three inches apart at their upper extremities, and two and a half at their termination. These two incisions were connected by a transverse cut, made a little below the nearly square projecting end of the upper fragment of the tibia; the three incisions describing the letter H. The flaps thus formed, consisting of the skin and subjacent cellular tissue only, were

raised up, exposing the fragments of the tibia at their point of union. The adjacent muscles were separated from the bone by the handle of the scalpel; the periosteum, very near the lower termination of the upper fragment, was divided by the scalpel; a small saw, somewhat in the form of a carving-knife, about ten inches long in the blade, suddenly tapered into a point of two and a half inches long, and rounded at the extremity, was next employed, and a slice of bone, less than a line in thickness, removed from the extremity of the upper fragment. The saw was carefully worked in the same line of direction, and in the same plane, frequently removing it to clear its teeth by a sponge, until the lower fragment was divided nearly through. What remained was forcibly fractured—a short, stout spiculum, adhering to the posterior portion of the lower fragment, and which was afterwards removed.

Upon examination, it was now found, as was anticipated, that transverse bridges of bone connected the tibia and fibula together above and below the seat of fracture—having been formed there after the injury, for the wise purpose of supporting the weakened limb—and prevented the upper and projecting portion from being brought in a normal line with the lower fragment. These bony bridges were removed by the aid of a chisel and strong nippers: and, by the same means, the ends of the two fragments of the tibia were adjusted and finally brought into perfect coaptation. The operation occu-occupied nearly an hour. No vessel required ligature; and the loss of blood did not exceed eight ounces.

The edges of the wound were brought together, and retained by adhesive straps. Lint, spread with simple cerate, was placed over them. The limb, from the toes to the knee, was then covered by successive turns of a roller. The patient was now carefully removed to bed. A soft, square pad, two inches thick, was placed over the external maleolus, and a similar one close to the knee-joint; upon these was laid a splint two and a half inches wide, to which the two fragments of the tibia were confined by a few turns of a roller, applied at the proper points. A soft pillow, covered with oiled silk, was made to half encircle the limb, by the aid of splints in a splint cloth, and the whole secured by tapes. The limb was protected from the pressure of the bed-clothes in the usual way.

Directed to take in the evening a cup of weak black tea, and a piece of dry toast.

9 o'clock, P. M. Patient comparatively comfortable.

19*th*.—9 o'clock, A. M. Skin natural; very slight suffusion of countenance; bowels not moved; pulse 80, and soft. Had very little sleep since the operation; experienced some few "twinges" in the limb. Became comparatively easy an hour after the operation. Complains of not being able to relax the muscles of the limb. Pain in the back last night and this morning.

A compress placed over the upper fragment, near its inferior extremity, to prevent its rising; it is secured in its place by tying one of the tapes of the splints across it.

Diet.—Barley water, chicken broth.

6 o'clock, P. M. Comfortable. Felt oppressed after taking broth; relieved after passing urine and perspiring freely. Urine brandy colored.

20*th*.—9 o'clock, A. M. Pulse 76; skin comfortable; looks cheerful. At 4 o'clock, A. M. had severe continued pain in the abdomen, probably from flatus. Patient applied hot dry cloths with advantage. Tongue slightly white.

Diet.—Small piece of roast beef; barley water.

9 o'clock, P. M. Has not been able to have an evacuation from the bowels from want of convenience, as he cannot get a pan beneath him, and is insurmountably repugnant to the use of a sheet. Complains that he has passed a miserable day; belly very tender and sore, but it is soft and not distended; pulse 76. Moved to a mattrass with a moveable piece on the left side, corresponding to the pelvis. The moving caused great pain and considerable exhaustion.

21*st*.—9 o'clock, A. M. After taking some warm broth the bowels were moved; and he has had another evacuatfon this morning. Slept several hours. Soreness and tenderness of the abdomen have disappeared; pulse 76; comfortable; says he is not aware, from any uneasy feeling, that his leg is broken.

External soiled parts of the dressing removed by scissors, and a Scultetus bandage placed over the whole; the oiled silk changed for a clean piece.

Diet continued.

6 o'clock, P. M. Had spasm in the leg in the afternoon.

22*d*.—Half past 9 o'clock, A. M. Pulse 76, and after taking coffee, (which acts kindly on his bowels,) 79. Had very little sleep last night; some spasms; bowels open.

Removed the dressings. Wound healthy.

A number of maggots, nearly a half inch long, about the wound. Washed with Castile soap and warm water. Dressing of lint and simple cerate. Pads at the ankle and knee

removed, and the splint, lightly padded, brought in contact with the limb. From a slight thickening of the lower flap, the lower fragment of the tibia *seems* to be in advance of the upper one.

Continue diet.

6 o'clock, P. M. No sleep; some spasm; great pain in the foot from pressure of the bandages, which was relieved by removing and re-applying them. Wound looks well.

Liquor anodyn. Hoffman. H. S.

23*d*.—Half past 9 o'clock, A. M. Slept about five hours last night; bowels open; pulse 76. Continue treatment.

6 o'clock P. M. Has had a comfortable day.

24*th*.—Half past 9 o'clock, A. M. Slept four hours; comfortable; pulse 76; bowels open; urine high colored, but now transparent. Continue treatment.

27*th*.—Nothing remarkable since last report. Slept very little last night. Wash the wound with tinct. myrrh.

Continue diet; half a tumbler of Philadelphia brown stout.

28*th*.—Slept six hours. Bran bags applied. Continue treatment.

November 2*d*.—In consequence of the upper fragment having slightly fallen out its proper line, a straight, narrow splint was applied on the outside of the leg.

5*th*.—Paste-board splint applied to the inside of the leg; bone begins to stiffen.

6*th*.—Splint applied on the inside of the leg, which reposes on the pillow without being secured by the splints and splint-cloth. Bowels are open every morning; pulse 80; sleeps four or five hours in the twenty-four; is very cheerful.

7*th*.—Wound nearly healed; suppuration has almost ceased.

December 31*st*.—At present the patient is walking about his apartment, aided by a cane. He wears the same boots that he wore previous to the operation, and does not think the limb is appreciably shortened. At the end of a fortnight he will be able to travel; but at this time it would be premature to state what the effect of the operation has been, although the limb is straight, and not appreciably shorter than it was prior to the operation.

To the young practitioner of surgery, this case is particularly interesting, and should lead all to study carefully the treatment of fractured bones, the result of which, if successful, adds very little to the reputation of the surgeon, but, if otherwise, is calculated to injure his professional character.

The following short notes of this case, were made by the patient himself, and are given in his own words:

October 18*th*, the day of the operation. The *cutting* less painful, and sawing more so than I had anticipated, especially on some portions of the bone, which were more sensitive than other portions. The use of the hammer and chisel to separate extraneous masses of bone, excessively shocking to the nervous system. It occupied rather more than one hour ere I was placed in bed and the limb adjusted, and three-quarters of an hour under the actual operation.

On being put to bed, and the wound dressed, I had little or no pain, and in every sense became comfortable. What pain there was, occurred at intervals of half to three-fourths of an hour, lasting only a few minutes, of a burning sensation rather than what I should call acute pain, and which seemed to linger about the exterior. Pulse rather full till nine P. M., when a healthy re-action took place. No symptoms of fever. The night was sleepless; little pain, but continued thirst.

Second day. The pains diminishing, and the intervals between them increased. Good spirits: no fever. An acute soreness in the abdomen, with excessive pain in the back—doubtless the effect of position. Had an hour's sleep. During the night obtained three hours sleep; but suffered greatly with pain in the abdomen and from thirst.

Third day. Little or no pain in the limb. Soreness in back and abdomen continuing; spirits good; no fever; little appetite. During the night had three hours sleep; much thirst; and always more nervous during the night than day.

Fourth day. Pain in abdomen and back very much abated, and the whole system more agreeable than heretofore. Appetite better. No fever. To-day the wound was exposed, and pronounced to have a healthy appearance. Though the day was agreeable, yet the night was the most irksome and painful of any previous to it, caused by a spasmodic attack in the limb at eleven P. M., and repeated several times during the night, occasioning an unusual flow of blood, creating pricking sensations about the wound and in the calf, from which I was relieved when the wound was dressed in the morning. It was remarked to-day that the muscles seemed to have accommodated themselves easily to their present and more natural position, from which they had been diverted just *two years and ten months;* and the bones retained in the desired position by very slight means.

Fifth day. After the dressing, the limb became easy: the *back* and *abdomen* are entirely relieved from pain at last. No fever, and spirits good. Several spasms occurred.

Had five hours sleep and no spasm.

Sixth day. No actual pain, but the wound is becoming extremely sensitive to touch or motion. The foot benumbed and heavy, and subject to frequent change from heat to cold, and vice versa. Digestion good. Four hours sleep, and no spasm.

Seventh day. The sensitiveness of the wound increasing, but still appears healthy; (what the doctors call beautiful.) The foot becoming more and more weighty, but has not swollen in the least.

Had four hours sleep at night; spasms abated.

Eighth day. Differs in no degree from the preceding one.

Ninth day. The wound has now become unbearably sensitive to the slightest touch or motion—ridiculously so. The spring of the floor, occasioned by a person walking across the room, and even the jar communicated to the building by carriages driving along the paved streets, affecting (if not actually afflicting) the wounded parts. In the first instance the pain was confined to the exterior wound, but now the interior has more than its share. Especially where the extraneous bones or bridges were removed is the seat of inconvenience.

Tenth day. No change in the last twenty-four hours.

Eleventh day. The same as the preceding twenty-four hours.

Twelfth day. No alteration in the sensitiveness of the wounded parts. At 5 P. M. was seized with a severe pain in the foot, as if all the bones in it had been crushed by some weighty mass. At six it became excruciating; caused it to be rubbed with oil of camphor, which allayed the pain almost immediately.

Thirteenth day. Extreme sensitiveness of the wound somewhat abated; otherwise no pain.

Fourteenth day. The transitions from heat to cold, &c., benumbed feeling, and sense of weight in the foot, mentioned on the sixth day, have continued up to this time, but at length are abating, together with the sensitiveness in the region of the wound.

From the second to the end of the third week, no new symptoms. No swelling. Good health. All inconveniences gradually diminishing. The union of the bones considered to have occurred unusually rapid during this week. On the twenty-first day it was considered tolerably firm. The only

pain and inconvenience to which I am now subjected, are from the application of *splints*, *compresses*, and such means as are usual for retaining the bones in their proper place.

To the end of the fourth week little or no pain, or other inconvenience consequent upon the operation. The union of the bones has become so firm as to admit of the limb being rolled about the pillow, and the wound healed, except in one point, where it is frequently probed, a fragment of bone being about to detach itself.

To the end of the fifth week, the union hardening perceptibly each day. Left the bed several times this week, for a few minutes, to receive a cold shower upon the limb. On the fortieth day, arose from the bed on crutches, and in four days thereafter the splints and bandages were dispensed with.

Remarks—During my confinement to bed, the pulse ranged from 70 to 87; and sometimes, from exciting causes, as high, temporarily, as 93. But my pulse is usually rapid, and easily excited. My appetite did not vary from its customrry moderate standard.

Entertaining no anxiety for the result, my mind was calm; and I was even satisfied with my confinement and almost torpid state of body.

It was remarked that the greatest degree of uneasiness, pains, spasms, and other annoyances incident to my condition, always occurred just as I was about to compose myself to sleep.

In the foregoing account, where I have given three, four, or five hours sleep, I would explain that I seldom had an unbroken repose for that time; that only on one occasion I had an hour's sleep in daylight; and that the night of the day on which I quitted the bed was the first I enjoyed for the entire night. In health, however, I am accustomed to little sleep—seldom more than five hours.

THE WESTERN JOURNAL.

Vol. V.—No. II.

LOUISVILLE, FEBRUARY 1, 1842.

AN EXPLANATION.

We received Dr. Seaton's communication, in reply to the strictures on his essay on Milk-sickness, just as the last sheets of our January number were about going to the press, and sent it to the printers without reading it, in the full confidence that it did not contain any thing exceptionable. When we further state, that, by a misunderstanding, the proof-sheet was not submitted to the inspection of either of the senior editors, and that the junior editor did not feel at liberty to alter the language of the article, supposing it had received the approbation of the former, our readers will be able to comprehend how so extraordinary a paper found a place in the Journal. Our friend, Dr. S., we are sure, on reading his remarks in print, will be struck with the harshness, injustice, and impropriety of a number of expressions, which, assuredly, we should have felt constrained to suppress if we had read his communication. Our colleague, Professor D., our readers require not to be informed by us, is a writer of equal caution and experience, who in the statement of facts is as scrupulously exact, as he is acute and discriminating in observing them. Y.

DIGITALIS.

Dr. Calvin Jones, of West Tennessee, a physician of age and experience, has sent us a paper designed to recal the attention of his brethren to the value of Digitalis, as a remedy in pulmonary and dropsical

diseases. We at first thought of publishing it entire; but have concluded, without intending the least disrespect to its worthy author, to give it in abstract.

He begins by expressing the opinion that Digitalis is a "remedial agent of great power, for which a substitute could not easily be obtained;" and then proceeds to inquire into the causes which, in latter times, have limited its use. They are, first, its being frequently inert, and of course doing no good; second, its having been used under inappropriate states of the system, when it has done harm. Of these Dr. Jones justly regards a high phlogistic diathesis as the most common. He cites a case of phthisis pulmonalis, in which this medicine appeared to prolong life for many years; but as it occurred before auscultation was invented, or pathological anatomy formed into a science, we have no means of knowing whether it was tubercular consumption, or only chronic bronchitis. In the latter, digitalis is certainly one of our best remedies. In the treatment of dropsies, Dr. J. has found this medicine of great value,—provided venesection preceded it. The following case, on account of its remote cause, we extract in the Doctor's own words:—

"I will mention but one other case, though several present themselves. Alexander Hobby, of Johnston County, N. Carolina, (I then resided on the Neuse,) for three or four years, in the cider and apple-brandy seasons, after considerable use and abuse of those articles had attacks of general dropsy. I uniformly bled him largely, gave him liberal quantities of nitrous salts, and, when his pulse became soft and yielding, completed the cure with digitalis. I mention as evidence of the usual salutary effect of the medicine, and the power which the habit of observation gave of predicting it, that I once told him that on such a morning I should visit him, when his pulse would be reduced from its 90 to 42 strokes in a minute. When he found the prediction exactly verified, (the precise number was a random guess of course), he was alarmed with the supposition that he was surrounded with supernatural intelligences and influences; a common belief among certain people in those bye-gone days, (1799) when the author of evil was strongly suspected of doing great good to the sick by means of his purchased agents. A cider season at last came, when I was necessarily absent from home, (in attendance in the Legislature of which I was a member), and poor old Hobby became its victim."

Of the preparations of Digitalis Dr. J. prefers the saturated tincture of the recent herb—from 12 to 16 drops twice a day, to be laid aside when the characteristic constitutional effects appear, and resumed when they have passed away.

CALOMEL REDUCED TO THE PROTOXIDE IN THE PRIMÆ VIÆ.

Dr. Runyon, of Trenton, Tennessee, writes to us that he has obtained globules of mercury as large as a squirrel shot, from the black matter discharged by some of his patients under the action of calomel. The matter is called "black sand," and resembles "pulverized charcoal." This deposition he proves to be the protoxide of mercury, by rubbing it in a mortar with magnesia, when the globules of quicksilver appear.

In such cases, Dr. R. says he is in the habit of combining opium with the calomel; but as this article is sometimes contra-indicated, he wishes to know whether any other substance can be conjoined with the calomel which will prevent it from undergoing this change in the primæ viæ. If any of our readers have been furnished by their experience with such a remedy, they will confer a favor on Dr. R. by communicating it. Y.

LITHOTOMY—AGAIN.

In our last we mentioned the operation for Lithotomy, by Professor Gross, nine days before the issuing of the number. We have now the pleasure to state, that the little patient was sent home, entirely restored, in three weeks. This day (Feb. 1) the Professor operated on another child, three years old. It was done before the class, without accident, and the little patient was sent away, apparently free from all danger. The calculus was small. The child a native of Louisville. D.

POLYPUS UTERI.

Doctors Page and Geoghegan, of Henry county, Ky., have sent us the notes of a case of polypus uteri, for three years mistaken by dif-

ferent physicians, for *prolapsus U. procidentia U.* and *inversio U.* Throughout the whole of that period, the patient, a negress, who had borne one child, *suffered extreme agony* in the vagina and uterus. The application of a metallic ligature, by means of a double canula, was soon followed by an abominable exhalation from the vagina, which continued till the eleventh day, when the tumor was detached. Its weight was sixteen ounces. We hope they will send it to the Obstetrical Department of our pathological museum.

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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

MARCH, 1842.

ART. I.—*Observations on the epidemic Yellow Fever of Natchez, and of the South-west.* By JOHN W. MONETTE, M. D., of Washington, Mississippi.

(*Continued.*)

THEORY OF YELLOW FEVER MIASM.

To produce yellow fever as an epidemic in our cities, we conceived three circumstances or grades of action necessary:

1. *Miasm*, or the simple basis, which uncombined we think harmless.

2. The union of miasm with impure air, or with air which has been exhausted by respiration, and charged with human effluvia. This combination we term *malaria* or *infectious air*. This is the proper nidus or receptacle for the dissemination

and extension of personal infection; and is *always requisite* for the spread of this disease as an epidemic.

3. *Infection*, or the union of personal infection with *malaria* or infectious air. In this state the poison becomes active, and constitutes the efficient, predisposing, and exciting cause of epidemic yellow fever. It constitutes an *aerial poisonous ferment*, extremely subtile in its nature and properties.

These views we will endeavor to illustrate as we progress. The term *miasm*, as an agent in the production of yellow fever, we use in a sense somewhat different from its common acceptation, and, as we think, with equal propriety and reason.

I. *The Miasm of Yellow Fever.*—This we believe a subtile, gaseous, invisible and inodorous matter, generated by the action of the sun, or by solar heat, upon *common atmosphere*, independently of any effluvia, fetor, or exhalation from the decomposition of animal matters, or of any exhalation from marshes, dry earth, or vegito-animal compounds, or any of the commonly received sources of miasm. We believe it the result of some unknown combination of the solar rays with portions of the atmosphere, in certain situations, and under certain circumstances. These circumstances are, that the air shall be to a certain extent confined or stagnant; such as we have in cities in sultry oppressive weather, when the temperature in the shade is steadily above 90° of Fahrenheit during some portion of the day, or above 125° in a fair exposure to the open rays of the sun. The precise nature of this combination we are unable to explain satisfactorily. The doctrine of marsh-miasm conceives something generated by a similar process. We suppose this miasm to be perfectly free from morbific properties in its *simple state*, but that it becomes morbific by combination with impure air; that by its specific gravity it becomes particularly separated from common air, and settles near the surface of the ground, and in low, damp, confined places, similar to collections of carbonic acid gas; that it is entirely neutralised by a temperature of 45°, and is partially neutralised by a temperature as high as 55°; that it generates slowly, and only while the temperature is above 90° in the shade.

Hence we infer that it can accumulate only after several days of continued high temperature, during a period, and in situations where the extreme heat by day in the shade is above 90°, and the lowest temperature at night is above 55°. We suppose, judging from all the circumstances of weather, preceding all the epidemics of this kind in the United States, that it will not accumulate in prejudicial quantities, in less than 10 or 12 days of unremitted hot, calm, and sultry weather, such as we have described; that whatever amount may have accumulated in any number of successive hot days, will be destroyed or neutralised by one cold night, with the mercury at any time below 55°; or a strong wind, or a tornado, would disperse or waft it off. Hot weather favors its generation, and calm weather its accumulation.

We believe it requires a temperature of 90° in the shade for its generation, because the yellow fever has never spread as an epidemic in any place where the mercury of Fahrenheit by day had not ranged up to 90°, for at least 10 days previous to the epidemic, with a night temperature above 60° in the coldest exposure. We infer that one night, in which the mercury would sink to 55°, would destroy all that had accumulated in a week.

The *mean* temperature, as generally estimated, is no test—*no criterion*, but the *actual highest range of the mercury by day and by night.* We infer that the miasm once accumulated is not injured by damp, or foggy air, unless the temperature fall below 80° by day and 65° by night. If several days of damp, foggy, or misty weather, with high temperature, succeed a week of hot, calm, and sultry weather, the miasm previously generated remains in *statu quo.* Low damp situations in cities attract and retain it.

This miasm is seldom generated in our latitude, except in cities and towns, where the temperature in summer is always at least 3° or 4° above the temperature in the country; and this increased temperature is produced by the great amount of reflecting and radiating bodies in those places.

The miasm accumulates in the West Indies, more or less during at least six months in the year, because the temperature during that time is always above the point requisite for its neutralisation; and for more than nine months in the year, the temperature is not reduced to the point requisite to destroy or neutralize *infection*, or to 32°.

We infer this miasm is innocuous in a pure and often renewed atmosphere, because we find that in many cities and towns, when there has been free ventilation, there has been no epidemic yellow fever, although the mercury has ranged as high as 90° or 93° for several days together; but under the same temperature, with a stagnant atmosphere, constituting sultry weather, there has been yellow fever in its epidemic form. Stagnant atmosphere in a city becomes rapidly contaminated, where probably 100 or even 500 persons to every acre of surface are each incessantly respiring the air, besides the constant exhalations from their bodies. By these means alone, the mass of atmosphere in a city would become perfectly saturated with these exhalations in the space of a few days of sultry weather, besides being exhausted of its oxygen or vitalizing principle, whatever it be. The miasm uniting with this kind of atmosphere, becomes slightly morbific, and predisposes to yellow fever—*but not to bilious fever*, as we shall show hereafter.

In this state it becomes *infectious air*, or *malaria;* and this air, confined in a high temperature, and combined with the morbid effluvia from a patient laboring under yellow fever, after a few days acquires active morbific properties, which will produce malignant yellow fever in those who are unacclimated to such air.

When the air of a city is prepared for this morbific combination, the introduction of a few cases of yellow fever, or beds, and large quantities of porous and woollen goods from an infected part of the city, will greatly increase the danger of an epidemic yellow fever in such place.

II. *Malaria or infectious air.*—We have said that this union of miasm with the contaminated air of cities in hot sultry

weather, predisposes to yellow fever; and the longer the duration of such weather the stronger will be the predisposition, and *cæteris paribus*, stronger in *strangers* than in resident or acclimated persons.

The whole population of the city or town may labor under this predisposition, and yet remain healthy and unconscious of danger; and if nothing occur as *exciting causes*, they may escape an epidemic, or even sporadic cases. But on the contrary, some cases will be excited into action by extraordinary circumstances of fatigue, exposure, or by some imprudence.

Every case, *however excited into action*, sporadic or otherwise, increases the danger and the predisposition, in those immediately about the sick. At such times, the presence of a large number of *northern strangers* in the city is one of the most dangerous circumstances, and tends more than any thing else to lead on the epidemic: because the atmospheric predisposition, which would be innocent to the resident population, would excite sporadic cases in the strangers; and every sporadic case at such time increases the virulence of the local malaria, and thus hastens on the epidemic. Each patient with yellow fever at that time, throws off into the local atmosphere of his room, an effluvium, a subtile gaseous emanation from his body, which tends strongly to render that atmosphere morbific; and if that room be closed for several days afterwards, with a steady temperature between 85° and 90° of Fahrenheit, the air in it will become infected, and will produce yellow fever in some of those who may enter and breathe it only for a few minutes, and especially in such as are not acclimated. When the general atmosphere in the vicinity is becoming assimilated, strangers and unacclimated persons will be among the first, if not the very first, victims.

But, at such time of general predisposition, if steamboats, charged with infected air from an infected port, and freighted with goods and passengers from the infected district, arrive daily at the wharves, and discharge those goods and passengers who have already imbibed the disease; and are also visited by scores of the idle and curious, besides those whose

duty requires them to be on board, we shall soon see what are called sporadic cases springing up in different parts of the city, and chiefly, too, in those who *have been* in the vicinity of the wharves or *on board* the steamboats. Thus the epidemic yellow fever is always ushered in, not only at Natchez, but at all other points where it occurs on the lower Mississippi.

Hence, we conceive after miasm is formed, the *first stage* of contamination is produced in the general air of a city by the respiration, and the exhalations from human bodies *in health*; the *second stage*, by the emanations from the same laboring under this peculiar disease; and this constitutes *infection*, which is a virulent atmospheric poison.

III. *Infection.*—When the local atmosphere of a city, town, or even a house, has gone through all the previous stages, it possesses very virulent qualities, and assumes properties which are peculiar to it in this state. It then has become infection; and in addition to its morbific qualities, it has the property or power of extending itself in an impure atmosphere, or of assimilating to itself a certain portion of the contaminated atmosphere around. Portions of this infected air may be transported from one place to another, and then introduced into contaminated air, it will assimilate a circumscribed portion of it, until the latter will possess the same morbific properties as that which was introduced. This process we conceive to be a "gaseous ferment." Dr. Cartwright calls it the "assimilating process."*

We call it a gaseous ferment from the analogy which appears to exist between its operations and those of the common carbonic acid gas fermentation: like it this infection requires a certain basis for its action; it requires a certain degree of temperature for a certain time, with quietude. In both a certain process, the fermentative, will at length be completed; but when this process is complete, a small portion of the product, introduced into a similar basis, and in similar temperature, will excite the process of fermentation or assimilation much

*Medical Recorder, Vol. ix. pp. 9 and 10.

more speedily, and probably at a lower temperature than was required in the first process without the *leaven.* In all these particulars, as well as others, the analogy holds good.

Without the proper basis for the action of the assimilating process, the infection ceases to extend itself; thus it cannot extend the sphere of its virus without contaminated air, or through a pure atmosphere; for, as Dr. Paloni of Naples observes, relative to the yellow fever of Leghorn, which desolated that city in the autumn of 1804, "the infection of this fever is of such a constitution, that *pure and renewed air decomposes its fomes,* at a small distance from the sick; on the other hand, *air that stagnates, and is replete with animal exhalations, easily becomes a vehicle for it.* Hence it happens, that as soon as the disorder broke out, we saw it rage most fiercely in the *most filthy and least ventilated* parts of the city. *Pure, fresh, renewed air, destroys its infection.*"*

This is precisely what we contend for, viz: that yellow fever is *not infectious in a pure, free air,* and that it *is infectious or communicable in a contaminated atmosphere.*

We have already alluded to the diverse and opposite sources of yellow-fever miasm, as adduced by the advocates of its domestic origin in contradistinction to its introduction from infected ports or by infected vessels. There are scarcely any two ports or towns where it has been ascribed to the same combination of local causes. In every place where it has prevailed the source has been peculiar; no two epidemics have been produced by the same local causes, if the theories of gentlemen be correct. All the speculations and theories that have been adduced in favor of its local origin in any port or town in the United States, have had an advocate in Natchez or New Orleans; none having been too weak or too absurd to find a friend or admirer here.

We ascribe the epidemic yellow fever of Natchez and all our south-western towns, to one and the same cause, or to the same combination of circumstances, which are as follows:

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* Medical Repository, Vol. viii. pp. 426—7, &c.

1. Hot, dry, and sultry weather during August and September; but especially for 15 or 20 days in succession, immediately preceding the epidemic visitation; during which period the mercury of Fahrenheit shall range regularly as high as 90° by day, and above 70° at night, with that peculiar feeling of the atmosphere which is generally termed *oppressive*—or as Dr Cartwright designates it, a "breathless state of the atmosphere."*

2. The existence of yellow fever as an epidemic in New Orleans, at least 10 days before it appears in Natchez.

3. Regular, daily and uninterrupted steamboat communication with New Orleans.

4. A general state of salubrity in the city up to the outbreak of the disease, and the same state of salubrity through the country generally, both before and during the epidemic.

5. Public attention diverted to imaginary causes in the city, and apprehension quieted by a reliance upon the security gained by the removal of certain imaginary sources, and the prophylactic virtues of lime; while the real danger of importation is disregarded. These we believe to be the most invariable circumstances which precede epidemic yellow fever in Natchez; and Natchez was a stranger to these visitations previously to the autumn of 1817, which was soon after the introduction of steamboats on the Mississippi river.

As this was the first time that Yellow Fever was known as an epidemic in Natchez, I will give a short notice of it, for which I am indebted to Dr. Perlee, one of the most able physicians of the city for several years. †

Epidemic of 1817.—Occasional cases were seen in Natchez as early as August preceding the epidemic; but where they contracted the disease I have not been able to learn. The summer had been very hot, with occasional showers up to the first of September, with a sultry condition of the atmosphere afterwards. Dr. Perlee says, "the weather had been such as

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* See Medical Recorder, Vol. ix, &c.

† See Chapman's Medical Journal, Vol. iii. p. 6.

predisposed very strongly to violent disease, even early in September, and required only a small concentration of power to produce a sweeping epidemic." There had been no uncommon sickness, except this "strong predisposition to violent disease," which no doubt the Doctor thought he perceived. "At this time, when the population was *highly susceptible*, the Washington *steamboat* reached us from New Orleans, with persons on board, ill of yellow fever, some of whom were landed; and several young men from town went on board, who were all taken sick soon after and died. *The disease spread rapidly and with most destructive malignity.* For some time it had its sway over the whole city. On the 28th of September the physicians publicly announced the existence of yellow fever, and a large portion of the population retired to the country." It continued to prevail with slight interruptions until the 9th of November; and several cases occurred six days later in those who returned after frost to their houses which had been closed during their absence.

The whole number of deaths in the city, during this epidemic, was one hundred and thirty-four; besides some in the country who contracted their disease in the city.

The "predisposing causes" to which Dr. Perlee ascribed this epidemic, are the exhalations from stagnant pools, from city filth, from newly made ground in levelling the streets, and from an old grave-yard near the middle of the city. This heterogeneous mixture of effluvia, he supposed, produced the high state of "general predisposition," and prepared the inhabitants for an epidemic; and required only the aid of some *exciting* cause to produce a "sweeping epidemic." Although he was an advocate for the local origin of yellow fever, and would not ascribe it under any circumstances to importation, he leaves us to infer that the Washington steamboat with her yellow-fever patients, and her infected cabin, was the exciting cause which alone was wanting up to that time. In this we cordially agree with him, and believe that the same degree of predisposition, without similar "exciting causes," would every summer pass off without an epidemic. Although Dr.

Perlee was an advocate for the local origin of this disease, he evidently considered the arrival of the steamboat Washington as an important incident in the history of this epidemic. At that time not more than a half dozen steamboats were on the Mississippi, and the arrival of this boat from New Orleans was a matter of much interest and curiosity; so that many went on board to gratify their curiosity, and thus aided in introducing the disease into the city.

The epidemic of 1819 was the next visitation. It began on the 4th of September by a few scattering cases, and was not considered epidemic until the 14th of September. It continued to prevail with great mortality until the first of December, when 200 persons had fallen victims to its fury.

Dr. Perlee ascribes this epidemic to the atmospheric predisposition generated by similar causes to those enumerated in the last epidemic. At this time steamboat arrivals were so common that he does not refer to that as an exciting cause.

In 1819, the yellow fever raged with great violence in New Orleans, from and after the middle of August. Cases had occurred occasionally on board the shipping and about the wharves as early as June. Toward the middle of August it raged severely among the shipping and spread to the adjacent streets, and also to the boats which had descended the river. *Not a ship escaped* without the loss of one or two hands, and some lost their whole crews; many steamboats became infected, and lost many of their passengers and crews. It was not entirely destroyed until January following.*

During the years 1820, 1821, and 1822, Natchez was exempt from yellow fever epidemics; yet the writer is well convinced that during each of these years, and especially in 1822, there were several deaths from this disease in the city which were traced to infection from New Orleans introduced in bales of blankets and other woollen goods, and some cases in persons who visited New Orleans on business, and were attacked after their return.

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* Medical Repository, New Series, Vol. vi: pp. 6—20.

The epidemic of 1823.—This was probably the most terrific that has ever visited Natchez, or any other city of its population. The first cases occurred between the 12th and 20th of August. It continued to rage with great mortality until checked by frost near the first of November. By that time about 320 souls had died from this disease.

The weather for some weeks preceding this epidemic was very warm and oppressive. Dr. Cartwright says the weather in August presented each day, "several hours at a time attended with a breathless state of the atmosphere."

This summer yellow fever made its appearance quite early in New Orleans: many cases occurred among the ships' crews and others about the wharves as early as July; and it became epidemic about the first week in August. The arrival of steamboats from New Orleans was a thing of daily occurrence before the epidemic put a check to all kinds of business.

As soon as the disease was pronounced epidemic in Natchez this summer, as usual every family who had the means of escape, left the city. A few days afterwards, when the disease began to rage, ten or twelve families, including about sixty souls, removed to a cross-roads near Washington, known as Coonville, and there erected sheds and huts for a temporary residence. Being of the poorer class, they brought with them their beds, clothing, and all their movables, which were crowded into their small, ill-ventilated apartments. Here they remained in apparent security for a week or ten days, when cases of yellow fever began to develope among them. In a few days it spread among them with great mortality, and in a few weeks there were about twenty deaths among them, besides as many recoveries. The disease assumed its most malignant character here, and was precisely the same disease that prevailed in Natchez, and was equally fatal. At this time the whole country was as healthy as usual, and no disease of the kind existed any where, except where the infection could be traced to Natchez. However, at length the air of the encampment at Coonville became infected, and was avoided by persons in the vicinity as carefully as the air of Natchez itself.

But in the meantime five persons who had visited Coonville, and had been exposed to no other source of infection, contracted the disease and died in the country. It was admitted that the air of Coonville was as strongly infected as that of Natchez itself.

In this case the infected air of Natchez in the form of *fomites*, contained in beds, bedding, clothes, &c. was carried out and confined in these crowded, ill-ventilated wooden huts, until it took on the assimilating process, and produced an epidemic, which would have spread as readily through five thousand persons if they had been congregated there. No one ever presumed to ascribe this little epidemic to city filth, grave-yards, or putrid bacon.

Dr. Cartwright, in a lengthy essay published in the Medical Recorder, ascribed the epidemic in Natchez this year to a lot of putrescent bacon in the south-west part of the city, aided by other putrescent animal matters supposed to have existed about the city.* As to the bacon, I have long since been assured by Col. Fleming Wood, the alleged proprietor of the bacon, that the information on that subject was entirely erroneous; and that no such lot of bacon was in the city. Scarcely any one is sufficiently credulous, or so biassed by theory, as to believe that Natchez, which is known to be one of the most cleanly cities in the South, should be so infested with carrion, and other putrid matters, as are supposed to be necessary to bring on an epidemic. If any stranger were credulous enough to entertain such a belief, he would at once repudiate the idea when he should learn that Natchez has long been rather remarkable for the number of half-starved, rapacious vultures, which hover round in anxious expectation of such matters, which they devour in less than half the time required for the same performance by northern carrion-crows.

In 1824, the city was free from an epidemic.

Epidemic of 1825.—This epidemic began under the hill, or at the landing, among the clerks of a commission house and

* Medical Recorder, Vol. ix: pp. 5—7.

others near the steamboat landing. Cases began to multiply about the 20th of August. Several persons attacked were removed by their friends into the upper city, where they finally died. On the last of August the alarm was such, that a general flight of the citizens to the country ensued. The disease prevailed nearly two weeks near the landing before it began to spread in the upper city; and the first cases in the latter were easily traced to intercourse with the landing.

The disease continued to prevail until checked by a freeze on the first of November. The whole number of deaths in Natchez was about 150 souls. As usual, several deaths occurred late in November in persons who had left the city early, and returned after frost into their houses, which had remained closed.

This year the disease was carried to Washington. This is a pleasant, elevated, and cleanly village, six miles east of Natchez, containing about 100 hundred houses thinly distributed over a space half as large as Natchez. It had heretofore been the retreat of the merchants, mechanics, and others who wished to continue their trade with the country. This fall Washington was crowded with people, goods, and all the movables necessary for business and house-keeping. Nearly half the mercantile establishments carried their goods along, and every day for ten days brought out new supplies from Natchez and New Orleans. No unusual sickness prevailed in Washington or in the surrounding country. During the first twenty days of September, the mercury ranged as high 90° to 93° each day, and the air was sultry and oppressive.

During the first ten days after the arrival of the Natchez people, there were about 8 deaths from yellow fever in those who had contracted the disease before they left Natchez. About this time others who were citizens of Washington and who had not been in Natchez, began to sicken with yellow fever; and by the 18th of September the disease was considered epidemic in Washington, when nearly all the population fled.

The whole number of deaths in the Washington epidemic

was about 60 souls. About ten cases and five deaths occurred among those who returned into houses which had been closed, and were not entirely disinfected by the cold weather.

Previous to this summer, Washington was known as a healthy retreat to the people of Natchez during their epidemic visitations, where the disease had never been known to spread. No one pretended to ascribe this epidemic to filth, or the usual sources to which it is ascribed in cities. Washington is remarkable for the absence of every thing like city filth.

Dr. Cartwright, however, did ascribe it to a quantity of "putrescent bacon," which he alleges to have been carried out from Natchez. Even this would be an admission that the disease was carried from Natchez to Washington. But the fact is, there was no such "putrescent bacon" as that to which he refers. The writer was any eye-witness to the whole of this epidemic, and resided within one hundred yards of the alleged putrid bacon, and he does not hesitate to say that the Doctor was misinformed on that subject.

I hesitate not to declare it as my belief, that there would have been no epidemic in Washington, unless the people and goods from Natchez had been crowded into it. Besides it must be remembered the merchants received large supplies of fall goods from New Orleans while they were in Washington, and among these were 8 or 10 bales of blankets to meet the annual fall demand of the planters.

The first citizens of Washington attacked were my patients; and their infection could be traced clearly to opening and handling those bales of blankets, and other goods brought from New Orleans and Natchez. The disease was imported to Washington as surely as it was to Coonville in 1823.

The intercourse between Natchez and New Orleans was uninterrupted: goods were almost daily received at Washington on the same day they were landed at Natchez.

Dr. Cartwright ascribed the epidemic this year, to causes similar to those which he adduced in 1823; to which he added "spoiled porter," "rotten sour-crout," and also a boat with some corn in it sunk near the wharf.

Dr. Merrill ascribed it to "loose earth" exposed to the sun, in making and filling up a wharf, and in levelling the streets. Others ascribed it to such combination of circumstances or causes, as their fancy might suggest. These causes had no agency whatever in producing the epidemic; and we have shown already that such causes are harmless as generators of yellow fever miasm. We assert without fear of successful refutation, that whenever these circumstances have synchronised with a yellow fever epidemic, they were only incidental occurrences, and not in any manner essential to its existence. It is certain that several epidemics have appeared in Natchez since 1825, without either of the causes assigned by Dr. Cartwright or Dr. Merrill.

It has been urged against the doctrine of importation, that in 1823 and 1825, previous to the visitation of the epidemics, there was a regular quarantine against boats from New Orleans. I admit there was a mock quarantine, but none that was effectual. Each boat from New Orleans at that time was required to round to at the quarantine ground, and permit the health officer to inspect her, when she passed on up to the landing at Natchez. It is well known, that although boats were subjected to this formality, no one was ever prohibited from discharging either freight or passengers. There never was a quarantine at Natchez, *on proper principles*, until the summer of 1841, and that quarantine excluded the disease from Natchez, although it was carried on to Vicksburg. We will speak of this again.

The next epidemic visitation in Natchez was in 1829. This was the mildest epidemic ever known in the city. The city was deserted early and the disease did not spread extensively.

For several years the city of Natchez escaped the visitation of yellow fever until the fall of 1837, when it again made its appearance.

The epidemic of 1837.—This began with a few cases called sporadic, about the 8th and 10th of September; and by the 15th it was considered epidemic. Many of the physicians denied

the existence of yellow fever in the city until several cases terminated fatally with the genuine black-vomit, which none could dispute. The disease continued to spread gradually and with occasional abatements, until checked by frost about the 25th of November. The number of deaths from this epidemic was about 280, including hospital cases, many of which had been landed in a moribund state from steamboats direct from New Orleans. The epidemic this year was more mild and slow in its advances than usual, until the middle of October, when it began to rage with great malignity. This season the first cases in September frequently assumed some of the symptoms so mild that it was declared by some to be *bilious fever.*

The city of Natchez was as healthy as usual until the cases began to multiply; and it must be remembered that there were many cases of yellow fever landed from steamboats direct from New Orleans for ten days before any cases appeared among the residents of the city. The Natchez Hospital had been opened for the reception of indigent boatmen and others; and scarcely a boat passed up from New Orleans at this season of the year, that did not leave some yellow-fever patient at the hospital. It is a well-known fact on the lower Mississippi, that from the time yellow fever begins to occur in New Orleans, almost every boat that passes up leaves one or more yellow-fever patients at Natchez to be removed to the hospital, in passing to which they are carried through the most populous part of the city.

For several years previous to 1837 the Natchez Hospital had been closed against the reception of sick from the boats; and during this time there was no epidemic. But, a year before, the legislature had made provision for throwing open the hospital to the indigent sick; and it was in full operation when the yellow fever broke out in New Orleans, and scarcely a day passed without the reception of one or more patients from ascending boats, after the first of June; and after the first of August nearly all these were yellow-fever cases.

It may be worthy of notice here, that in the summer of 1841, when the quarantine was adopted, the hospital was closed, and no patients permitted to land from the boats, unless at private houses. As a general remark, there has never been yellow fever in Natchez unless when the hospital was open for the reception of indigent boatmen and others from the river. When the hospital is open, it is an inducement for all the steamboats passing up to land at Natchez, if for no other purpose than to relieve themselves of the sick, whom they might have to bury on their way above.

YELLOW FEVER IS NOT ENDEMIC IN THE UNITED STATES.

By this I mean to say, that *yellow fever is a specific disease*, having no perfect analogy, or any characteristic symptoms which identify it with bilious fever, which is endemic in the United States.

The circumstances under which these two forms of disease prevail are widely different; the persons liable to each are different; the times and places where each prevails are different; the symptoms and pathology of each are different; and the impression left upon the system after recovery, is different; a mild case of yellow fever is not a bilious fever; and a severe and malignant case of bilious fever is not yellow fever.

The following are some of the principal points of difference between the two diseases—viz:

1. *Bilious fever* prevails in the south, chiefly in hot and showery weather, and more commmonly in May, June and July; but sometimes in August and September. *Yellow fever* in the United States, never prevails as an epidemic until late in July, and generally, not before the middle of August or September; and always after a hot, dry, and sultry state of the weather.

2. *Bilious fever*, at times, prevails over certain districts of country, and generally among a sparse population, and is more common in country situations than in towns or cities. *Yellow fever* is confined as an epidemic, exclusively to towns

and cities, and appears *first* in commercial ports and large trading towns, and spreads only among a dense population, in an impure air.

3. When *bilious fever* prevails, it is caused by a *hot and moist* atmosphere, producing a degree of insalubrity extending over many miles of surface continuously, and without any circumscribed limits. *Yellow fever* prevails, or becomes epidemic in *hot and dry* seasons, and is restricted to certain limits, and to a local atmosphere as clearly defined as the bounds of a town or village, or the limits of one or more streets in a city; or one or more houses, or even to a single ship; while all the exterior air is perfectly salubrious, and the country population is uncommonly healthy, being often exempt from any general disease.

4. *Bilious fever* exists in all grades, from the simplest remittent to malignant bilious fever, terminating fatally, and yet preserves its distinct character, never assuming any of the pathognomic symptoms of yellow fever. *Yellow fever* in like manner exists in all grades from the mildest to the most malignant form, without losing its distinct and pathognomic character, whether it terminates in convalescence or death.

5. Persons who are natives of tropical climates, or those who have become acclimated to yellow-fever malaria, or who have recovered from one attack, are mostly exempt from a subsequent attack of yellow fever, but may have repeated attacks of bilious fever. Those who have been subjected to frequent, or annual attacks of *bilious fever*, are more liable to subsequent attacks, than those who have never suffered from it: and they are equally as obnoxious to epidemic yellow fever, as those who have never had bilious fever.

6. *Bilious fever* occurs in an atmosphere but slightly, if at all, contaminated by respiration; yellow fever, as an epidemic, depends for its existence upon air contaminated by human respiration.

Observant practitioners of the South, who have been familiar with yellow fever and also with bilious fever, do not pretend to identify the two forms of disease. They know by

experience and repeated observation, that they are essentially different forms of disease; that yellow fever is a disease *sui generis;* and that yellow fever and bilious fever do not prevail in the same local atmosphere. When bilious fever prevails generally in the surrounding country, the cities have no cause to apprehend epidemic yellow fever.

In this I am sustained by the testimony of all southern experience untrammelled by theory. The venerable Dr. Samuel Hogg, of Nashville, who practiced several years in Natchez, has assured me repeatedly of his firm conviction, that yellow fever is a specific disease, and partakes no more of the character of bilious fever, than of any other form of disease. In relation to the epidemic of 1837 in Natchez, he thus expresses himself in the Western Journal of Medicine and Surgery:*—"It was not, as has been supposed, a high or malignant grade of bilious fever; the whole surrounding country being more exempt from that disease than usual." . . . . "Also in most cases of recovery, the first satisfactory evidence of amendment, was a plentiful secretion of dark acrid bile."

After showing that it differed from all the ordinary diseases of the country, he remarks:—"If it were neither of the foregoing diseases, the question arises, *What was it?* I must briefly answer, that it was an assemblage of symptoms, or rational signs, indicating the modified condition of such organs as previous predisposing causes might have made obnoxious to the morbid influence of a specific cause, not cognizable to our senses—a poison *sui generis*, infecting a certain atmosphere."

On the 20th of October, 1839, the writer had an interview with the same distinguished individual, who had just returned from Nashville, by land, and through the interior of Mississippi, from north to south. The Doctor declared that in his route, he had passed leisurely through the whole length of the State, visiting most of the towns and villages on the way; and that while he daily heard of the ravages of yellow fever in

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*See June No. for 1840—Hogg on the epidemic fevers of Natchez.

most of the cities and towns in the southwestern portion of the State, he was astonished to find so universal an exemption from disease of every kind, in the interior; and that he had not seen or heard of a case of bilious fever in the whole route. He then declared that the evidence was conclusive, that yellow fever and bilious fever were two separate and distinct diseases. He expressed his belief, that no discriminating observer, who had witnessed the facts of this summer, would contend otherwise; for the case presented by the summer and autumn of 1839, would amply convince any man of sound judgment. The writer has witnessed the same thing several times in the lapse of twenty years. From the experience of twenty years' practice in the vicinity of Natchez, I have learnt that a hot and dry season during the summer months is a certain guaranty of health; a hot and wet season is a sure concomitant of sickness, and especially of bilious and congestive fevers. As a general rule it is known proverbially to be healthy in the country while yellow fever is raging in the cities and river towns. The inference is conclusive, that ordinary bilious and remittent fevers originate from causes, and under circumstances, entirely different from those which lead on yellow fever in the cities. So far as analogical reasoning can convince, these facts prove clearly that yellow fever is a disease *sui generis;* besides which we see that the symptoms, the accession, the course, the duration, and the termination, are all different in the two diseases. The organs and tissues mainly implicated are different.

Yellow fever is properly a disease of tropical climates. Like some tropical plants it may be transported to a more northern climate, and for a time may flourish; but the frost of our winters will utterly destroy it, and it must be annually renewed. Without this annual transplanting or renewal, in our climate it would die and become extinct. But the constant commercial intercourse with the tropical ports, serves to keep up the annual supply of this exotic. It can be successfully transplanted in our climate, only for a short time, when the weather in certain sections of the country is strongly

assimilated to the climate of the West Indies—such as in the island of Curacoa.

To establish the diversity between yellow fever and bilious fever, I am extremely happy to be able to cite the authority of Professor Caldwell,* one of the most distinguished teachers of medicine in the United States. He supposes the poison of yellow fever may be constituted of different proportions of the same elementary principles, which enter into the morbific miasm of bilious fever; but that the proportions of these constituents are so varied, that the poison resulting is entirely different in its effects upon the human system. He remarks, that, "wherever genuine yellow fever reigns as an epidemic, it reigns alone." Speaking of the peculiar nature of yellow fever, he continues: "Throughout the whole range its type is the same. It continues to be every where yellow fever; although in different places of very different grades. Under its lightest and simplest modification it is less severe, and more easily cured, than intermitting fever. Yet in type and character it is as different from that disease now, as when marked by its highest grade of malignity. Its strength and power to injure are gone; but in its form it has suffered no mutation."

In illustration of the diversity of the diseases, I will state the following fact which fell under my notice. A friend of mine had fifteen negro slaves in New Orleans, where they had become thoroughly acclimated to yellow fever infection, and were exempt from its attacks during several epidemics in the city. In the spring of 1835, he removed them to a plantation on the Mississippi river a few miles above Natchez, and about 300 miles above New Orleans. During the following summer bilious fever prevailed to a considerable extent through the country, the weather being hot and showery. During the season every one of these negroes had severe attacks of bilious fever, in its severest grade, and one of them died from it who had been raised in New Orleans, and was not liable to yellow

* Medical and Physiological Memoirs—Prize Questions, pp. 210—211, &c.

fever. The others were removed to New Orleans in 1838, and remained there during the most malignant epidemic of 1839, in the most perfect health. This principle might be illustrated in a hundred cases. But it appears to me unnecessary to enter further into a discussion of the question whether yellow fever be a disease *sui generis*, or only a high grade of bilious fever.

I have been told by enlightened physicians and teachers of medicine in the region of the Ohio, that the two diseases are identical; that the bilious fevers on the Ohio frequently run into the yellow-fever grade; and that they have seen genuine yellow fever in the Ohio valley, of local origin. I do not hesitate to declare it as my opinion, that they are altogether mistaken on that point. A very strong argument in my favor is the fact, that scarcely a year passes without many young physicians emigrating to the south, as fully imbued with those doctrines as their learned teachers could desire; and they never do recognize yellow fever when they first meet with it; and almost invariably it is a source of much mortification to them afterwards. The older practitioners who are familiar with it, recognize it at once, and in any stage; those who have never seen it, but who are confident of their judgment, almost invariably deny the existence of yellow fever until it has made havoc among their patients and derided their skill. The medical faculty of Vicksburg in 1841, denied the existence of yellow fever in their city for two weeks after it was sweeping them off at the rate of 8 or 10 a day. This was the case too after several of them, unconsciously, had seen cases in the fall of 1839. In both cases it was called congestive fever. Our most eminent physicians, on their first introduction to the disease, were placed in the same unpleasant predicament. An intelligent physician of Vicksburg, informed me in December 1841, that for two weeks they had no suspicion of yellow fever, and considered the epidemic as some new form of congestive fever; and of course the treatment was not such as it would have been under a certain knowledge of its true character.

Along with the few advantages which have resulted from the dissemination of the doctrines of Dr. Rush, relative to the local origin of yellow fever, it must be admitted that several important evils have come. Of these, not the least is the utter disregard of many prudential measures, calculated to prevent the spread of the pestilence, as well as its introduction into our sea-ports. His doctrines inculcate an imprudent exposure of the healthy to the sources of disease, to infected atmosphere; and thereby to unnecessarily endanger the lives of our citizens, and the prosperity of our most flourishing cities. This exposure is inculcated under a vague conception of the terms, contagion and infection, at least, by those who are thus induced to become its victims. Relying upon some indefinite meaning of the terms, and utterly ignorant of the true laws which govern the origin and spread of yellow fever in the south-west, many enterprising and generous young men from the north, have been annually sacrificed to the prejudices of education. Hundreds every year fall victims, who, under proper views of this disease, might pursue the path of safety.

(TO BE CONCLUDED.)

ART. II.—*On the Impropriety of Mercurial Salivation.* By Dr. THOMAS TOWNSEND, of Wheeling, Virginia.

A salivation from mercury, though not generally dangerous, is so great an inconvenience, and so much dreaded by patients, as frequently to deprive the physician of this valuable article of medicine. It is not at all surprising that patients dread a mercurial sore mouth, for in truth it is a loathsome, disgusting, and painful disease; and frequently worse than the disease for the cure of which it was produced. This being the case, as all candid medical men must acknowledge, the question presents itself, can mercury be used, and its agency as a remedy be obtained, without the inconvenience of a mercurial sore

mouth? With the three exceptions of *acidity of the stomach*, *diseased* and *spongy gums*, and where the medicine cannot be made to *operate in due time*, I answer in the affirmative. If then, every medical man may obtain all the remedial agency and beneficial effects of mercury without its inconvenience; and if the very object of the profession is, not to inflict pain, but to relieve it, he is bound by every principle of uprightness, as well as humanity, not to add to the afflictions of his patients, the suffering and pain of a disgusting, loathsome, mercurial sore-mouth. If this be true, why salivate at all? what agency has salivation in the cure of disease? why then give mercurial preparations with a view to produce salivation? This is an important inquiry, and should receive the candid investigation of the medical profession. If ptyalism has not a decided physiological agency in the cure of disease, it certainly should not intentionally be produced.

All medicines act on the living system by stimulation. Every medicine has a specific action of its own, differing in some one or more particulars from the operation of every other medicine, on account of the peculiarity of its stimulation, or the particular part or branch of the system, upon which its impress is made. And this is as true of the preparations of mercury as of any other medicine. The most obvious specific effect of mercury is that of stimulating the salivary glands into such an increased action as either to amount to actual inflammation, or to a state of things bordering upon it; and attended with inflammation and ulceration about the mouths of their ducts. I will here make a quotation from the United States Dispensatory of Wood and Bache, for the purpose of showing what these gentlemen consider the modus operandi of mercury, and what no doubt is the generally received opinion of the medical professsion on that point, and more particularly what is considered *its constitutional effect.*

"Of the modus operandi of mercury, we can say nothing farther than that it seems to act through the medium of the circulation, and that it possesses a peculiar alterative power over the vital functions, which enables it in many cases to sub-

vert diseased actions by substituting its own in their place. This alterative power is sometimes exerted, without being attended with any other vital phenomenon than the removal of the disease, while at other times it is attended with certain obvious effects, indicative of the agency of a potent stimulant. In the latter case, its operation is marked by a quickened circulation, with a frequent and jerking pulse; by an increase of activity imparted to the secretory functions, particularly those of the salivary glands and the liver; by an exaltation of the nervous sensibility; and, in short, a general excitement of the organic actions of the system. When its effects are not otherwise obvious than in the subversion of disease, its operation may be presumed to be the same as when it produces obvious stimulating effects, though so slight and imperceptible as altogether to escape notice.

"When mercury acts insensibly as an alterative, there is not the least disturbance of the circulation; but when it operates decidedly and obviously, it is very prone to let the brunt of its action fall upon the salivary glands, causing in many instances, an immoderate flow of saliva, and constituting the condition of things denominated ptyalism or salivation. Under these circumstances, to the alterative effects of the mineral, are added those of depletion and revulsion. Occasionally its depletory action is exhibited in an increased secretion of urine, or an immoderate flow of bile; and where ptyalism can not be induced, and either of these secretions becomes considerably augmented, the circumstance ought to be held equally conclusive of the constitutional effects as if the mouth had been affected."

I suppose from this quotation that the ptyalism is taken and held to be the obvious evidence of the constitutional effects of mercury. But during its administration, if an increased secretion of urine, or an immoderate flow of bile take place, we ought to hold this "equally conclusive of the constitutional effects as if the mouth had been affected." And "when its effects are no otherwise obvious than in the suppression of disease," and "its operation presumed to be the same," I

would ask why we should not "hold this equally conclusive of its constitutional effects as if the mouth had been affected." As it is so "very prone to let the brunt of its action fall upon the salivary glands," causing either "an immoderate flow of saliva," or an ulceration of the insides of the cheeks, and of the neighboring gums, and soreness of the teeth, &c., "constituting the condition of things denominated ptyalism or salivation," may we not with great propriety call this the *local specific effect* of mercury? In other words, does not salivation furnish the obvious evidence that the medicine has produced its local specific effect?

The specific effect of this article is salivation. If mercury be determined to the mouth it will expend its whole force about the mouth and salivary glands. Every practitioner of much experience knows, that if he have a patient with a mercurial sore mouth, and in this condition of things he give a dose of calomel as a cathartic, it will not operate, but will go to the mouth and make it sorer; and he will be compelled to prescribe some other cathartic. The ptyalism is so great an inconvenience to the patient that, if possible, the remedial agency of mercury should, at all times, be obtained by what Wood and Bache call its "alterative power," which is more properly "its constitutional effects" than ptyalism, the action of which is, at first, entirely local and confined to the vessels about the mouth. But when the inflammation of the mouths of the salivary ducts, and of the gums, and the periosteum of the fangs of the teeth, becomes considerable, the irritation from this local inflammation produces sympathetic fever, for the same reason, and on the same physiological principle as the local irritation and pain from the inflammation of wounds, such, for instance, as amputation, or from other local inflammations followed by sympathetic fever. This inflammation and sympathetic fever, although attended by "a quickened circulation and with a jerking pulse," are not sufficient, in my estimation, to establish the opinion that this is "the constitutional effect" of mercury, but rather its specific effect. If the term "constitutional effect" be applicable at all to the effects of

mercury in its modus operandi, it should rather be applied to the effects which it produces in other parts or branches of the system, than the salivary glands. Thus it will be seen that, instead of adopting the commonly received opinion, that a mercurial salivation is the evidence of the constitutional effects of the mineral, I consider this circumstance the evidence, that it has ceased to be a general or constitutional remedy, and has become a local irritant. For so soon as the medicine begins to be determined to the mouth, all that may be given will go the same way, and keep the mouth sore so long as the medicine may be continued. If we wish the agency and remedial power of this medicine to operate on other portions of the system, the local or specific effect should be avoided. The question then very naturally occurs, can this be done? I answer it can.

In the early part of my practice I entertained the common opinion, that salivation ought to be frequently produced, not only in syphilis and fevers, but in chronic diseases. In two cases of fever occurring nearly at the same time, I prescribed calomel, and directed the patients to drink as much cold water as they wished, and told them that if the mouth became sore so much the better. I visited them daily, and they both recovered without being salivated. These cases led me to make observations for myself, the result of which was, that cold water for common drink, did not, and would not, determine calomel to the mouth, and make it salivate, according to the generally received opinion. At a later period, from having so frequently observed a salivation take place when acid drinks, such as tamarind water, lemonade, or cream of tartar, were used during the administration of calomel, I came to the conclusion that acids must have something to do with the production of this effect. I then began to experiment, until I became fully satisfied, that the use of acid drinks during the administration of calomel, and the salivation, stood to each other in the relation of cause and effect. After becoming satisfied of this fact, I forbade acids altogether, during the use of calomel; and since that time I have had no case of salivation.

when patients would rigidly follow directions. After a few years' observation and experience of this mode of using and managing mercury, I became fully satisfied of the superiority of obtaining its remedial agency and alterative effects without the troublesome inconvenience of a salivation.

I have no hesitation in saying that a cure is more speedily and better performed by calomel, or any other mercurial preparation, without ptyalism than with it. As mercury operates through the medium of the sanguiferous system, there is no doubt in my mind that it operates by stimulating into increased action both the secernent and absorbent vessels of the system. By a judicious combination with other articles, which operate on the secernent or absorbent system, mercury may be determined to the one or the other, and in this way act as an alterative, so as to change diseased action, and restore the system to a healthy condition, much better than when permitted to go to the mouth and produce salivation. Colchicum and sanguinaria, in certain doses, act as alteratives, and change diseased action, without any material evacuation, either by vomiting, purging, or sweating; and such, I apprehend, is the operation of mercury when, as is said in the Dispensatory, "it subverts diseased action without any obvious effect" on the circulation. But it is usually followed by evacuations from the intestinal canal. To this effect of operating on the alimentary canal, after having made its peculiar impression on other parts of the system to which it had been directed, may be attributed the superiority of mercury as an alterative over almost every other article in the materia medica. In fact, if it be prevented from being determined to the mouth, it may be made to operate on the capillary arteries, veins, and absorbents, and the whole glandular system.

I consider its operation on the salivary glands as definitely specific as that of the specific operation of secale cornutum on the muscular fibres of the uterus. If permitted to go to the salivary glands, it will expend the whole force of its stimulating power upon those parts as certainly as the latter medicine exerts its action upon the

uterus. And, as the associated action of the abdominal and other muscles results from the increased activity of those of the uterus, so the increased activity of the vessels about the mouth may bring into association, through the medium of nervous influence, an increased activity of the whole sanguiferous system, as manifested by the "frequent jerking pulse."

During the last twelve or fourteen years, I have had no case of salivation in my practice, except such as may be considered accidental—that is, where patients, contrary to directions, while taking mercury have used acids, or where the stomach was loaded with acid at the commencement of using it, or where the medicine could not be made to operate so as to be carried out of the system in due time, or where the gums were diseased, spongy, and inflamed, and the action already determined to the mouth. The first of these accidental circumstances depends entirely on the patient and his nurses. The second may, in general, be easily remedied by giving before the administration of calomel, a sufficient quantity of bicarbonate of soda to correct the existing acid, and by giving a little from time to time to neutralise that which may continue to be generated, until the medicine shall have operated and been carried out of the system. I know no remedy for the diseased and spongy gums, but to go to a dentist, and get the gums cured and the mouth put in order before the individual becomes otherwise sick! If the patient has neglected this, when he falls sick, and mercury becomes necessary, he must run the risk of a sore mouth, and submit, when it takes place, with the best grace he can. With regard to the slow and constipated state of the bowels, which retains the article too long in the system, or until it becomes determined to the mouth—when we have reason to suspect sore mouth, this can only be prevented by using other cathartics more speedy in their operation, and assisting them by enemata. I know no other circumstances, when acids are strictly avoided, that will determine calomel to the mouth, and make it salivate, but the three just enumerated.

I adopted the practice of so administering and managing calomel as to avoid salivation, under the full conviction that its action when determined to the glands about the mouth, is local, and not general over the constitution—that when it produces ptyalism, it acts as a local irritant, and that if we wish "its constitutional effects," or rather its operation on other parts of the system than the salivary glands, it must be so managed as to prevent its determination to the mouth.

The view I entertain, that salivation is not the constitutional, but the local specific effect of mercury, has been greatly strengthened from finding every medical man, with whom I have conversed on this subject, and who advocated the old doctrine, unable to give a rational physiological reason why a patient laboring under bilious remittent fever, for instance, should be salivated; or why salivation should be resorted to in a case of enlargement or chronic inflammation of the liver or spleen; or why this effect should be produced for the cure of incipient cataract, or removal of opacity of the cornea from abscess upon that membrane. Can any one explain the modus operandi, so to speak, of salivation, in the cure of any one of these diseases—unless by referring it to the doctrine of sympathy?—a term which, Dr. Porter says, "will cloak ignorance under the appearance of science, as well as any other," and cut off all farther inquiry and investigation, so as to be passed off as an explanation of what is not understood. I can not believe, then, that ptyalism is the constitutional effect of mercury, until a clear, rational, and physiological explanation can be given why the local inflammation about the mouth is constitutional. Until this can be done, I must be permitted to consider this local inflammation as the local specific effect: and that it is only in the absence, or rather avoidance of this local effect, that we are able to avail ourselves in full of the general remedial agency of this medicine in other parts in which we wish it to operate, or to which we wish its agency directed.

I hope the reader will not hastily condemn these views because they may be new to him, but will try them by the

test of experience, and if he finds them to be true, have candor and magnanimity enough to acknowledge their correctness. But if on a full and fair trial by experiment he finds them untrue, then I shall expect him to give a rational physiological explanation of the modus operandi of mercury, such as will show conclusively their fallacy. I have been long intending to publish these views, but felt fearful, because they may not be considered orthodox. But when I reflect that the profession to which I belong cannot be considered as having arrived at that state of perfection, at which investigation should cease, because the profession is incapable of farther improvement; and when I reflect further, that a physician who makes no attempt to improve his profession, lives to but little purpose, I have at last ventured to submit these views, with the hope that if they do nothing more, they will induce those whose talents, acquirements, and station so much better fit them for the purpose, to test by experience my modified method of managing and using this potent, useful, and necessary article of the materia medica—an article indeed, for which, in many cases, we have no substitute. And besides this, and as a further reason for desiring others to try this method of employing mercury, I may remark, that one of the professed objects of the medical profession is, to relieve the distress, and pain, and suffering of our fellow beings. This being the case, humanity requires, not only that we should do this to the utmost of our ability, but that in doing it, we should not give any additional pain, or by the use of our remedial agents, produce any increase of suffering that can be avoided.

As I feel assured that all the beneficial agency may be had from the operation of mercury, as an alterative or cathartic, without the inconvenience of a mercurial sore mouth; and, as I believe, further, that the general agency and efficacy are more certain and more efficient, more agreeable to the patient, and more consistent with the principles of humanity, I hope to live to see the day when no enlightened, high-minded and honorable physician will designedly produce a

mercurial salivation; but will unite, as he ought to do, in removing any prejudice in the minds of the people, not only against this drug, but against the medical profession for its employment.

Jan. 13, 1842.

Art. II.—*Uterine Hemorrhage, with expulsion of the Ovum, successfully treated.* By Dr. J. H. Holmes, of Spring Ridge, Mississippi.

I was called on the 13th day of August 1839, in consultation, to see Mrs. H., aged 30, of sanguine temperament, and in the third month of pregnancy. I learned that she had received a fall from a horse in the early part of the day, one or two hours after which she complained of severe pain in the back and loins, occasionally extending to the uterus; these pains continued for some time, accompanied by a profuse discharge of blood from the vagina.

The midwife who had been called to see Mrs. H., becoming alarmed at her situation, had Dr. F. sent for, who, on his arrival, immediately bled the patient, gave her an anodyne, and ordered cold applications to the abdomen. These means for a time arrested the discharge; finally it returned with more violence than ever, and he ordered a pill of the acetate of lead and opium every hour. An examination was now made to learn the situation of the os tincae; this was found considerably relaxed and dilated.

At 3 o'clock, P. M., the flooding was violent, accompanied by trifling pain, frequent syncope, and a very small, quick pulse. At the suggestion of Dr. F., I was sent for from a distance of twelve miles. When I arrived, at 9 o'clock P. M., I could find no pulse at the wrist; the flooding continued slowly, with complete atony of the uterus; there was frequent syncope and vomiting, and occasionally delirium. I inquired of Dr. F. and the midwife, if the ovum had been expelled;

they were confident that it had not come away. I was not disposed to make an examination myself in regard to the situation of the os tincae, from the fact that frequent touching is not only injurious by fatiguing the patient, but by removing the coagula that may be important in stopping the hemorrhage.

I advised the free administration of ergot in decoction. We had some prepared in a few minutes and given to her, but the stomach instantly rejected it. Alkalies and absorbents were then resorted to, and a sinapism was applied over the stomach with a view of quieting it. The ergot was again tried with a hope that it would be retained; but it seemed that we were only to meet with disappointment on all sides.

I suggested the propriety of making Mrs. H.'s situation known to her husband, and urging a speedy delivery; this was done by Dr. F., he being the family physician. The reply was, that he would rather see her die than that we should make an effort of that kind. The ergot, acetate of lead, opium, and cold applications having failed, we had but one alternative left, that of using the tampon, and leaving nature to effect a delivery. However, in the midst of this dilemma, we proposed to Mrs. H. to allow us to rupture the membranes and thus bring about a speedy delivery; to this she readily consented.

I was selected to make the examination, and see what could be done. Introducing the index finger of the right hand, I found the os externum very much relaxed, and the os tincae considerably dilated; upon extending the finger beyond the os tincae, I discovered that the placenta was loose and flabby, but still adherent to the fundus and right side of the uterus. I also convinced myself that the ovum had been discharged at some time during the early part of the day. I endeavored to get hold of the placenta between the finger and thumb, and extract it, but having failed in this we procured a small wire, bent at one end in the shape of a hook. The curved extremity of the wire was conducted along the finger of the right hand to the fundus of the uterus, and being drawn down gently, was hooked into the placenta, which it brought away. A tampon of old

linen previously oiled was introduced with a view of arresting any further hemorrhage (for at this moment every ounce of blood was of immense value to the patient), until a contraction of the womb came on. Her complete exhaustion, cold extremities, and frequent syncope, induced us to apply a roller of flannel, dipped in warm turpentine, to her extremities. In two hours a partial reaction had ensued, and by morning we had the pleasure of seeing our patient so far improved as to consider her in a fair way to recover with care. The tampon was extracted next evening; her recovery was very slow and gradual, being confined to her room for four weeks.

I have been induced to report this case, not for any thing novel in its treatment or management, but for its rare occurrence, and the success that attended our imperfect wire crotchet.

September, 1841.

Selections from American and Foreign Journals.

Action of Spirits upon Habitual Drunkards. By Prof. C. H. Schultz, of Berlin. There are two points into which this subject naturally divides itself:—1*st*, What is the nature of the action of ardent spirits on habitual drunkards? 2*d*, Why does not wine produce, equally with spirits, those morbid effects which are observed in the habitual drunkard?

Professor Schultz distinguishes between intoxication—a merely temporary effect of ardent spirits, the result of their physiological and medical action in excess—and their pathological action, which shows itself in its highest degree in the production of delirium tremens. Intoxication is a brief excitement, and one, to a certain extent, normal, which ceases when the remote cause is removed; but tremors and delirium are the result of a morbid reaction, which continues for a long time after the cause has ceased to act. In investigating the nature of the morbid condition to which habitual spirit drinking gives rise, we must take no account of its short stimulating effect, which is rather the opposite of the disease produced by spirits, than its first stage.

Some writers have regarded this disease as an over-excitement of the nervous system, amounting almost to an inflammatory condition, but ending in exhaustion. Others have considered it to be the result of the direct action of spirits on the blood, and have regarded the nervous symptoms merely as secondary. The dark color of the blood of drunkards, which several persons have noticed, favors the supposition, that some special change is produced in that fluid. The causes, however, by which the color of the blood may be modified are so various, that a mere knowledge of the fact that such a change occurs, is not enough to solve any of the difficulties of the subject. The supposition that this change consists in an excess of hydrogen and carbon in the blood, is contradicted

by the dissimilarity of the symptoms which intoxication produces, from those which result from respiring any of the narcotic gases. The analogy between the states of the blood under those two conditions is merely apparent, and has not been shown to exist in any point besides color. Orfila and Renard have attached much importance to the chemical action of spirits on the mucous membrane of the intestines; alcohol coagulating albumen, but having in other respects an antiseptic property. It has been supposed, by the means of this property, to interfere with digestion; but this opinon is in many respects erroneous, for there is a great tendency to decomposition in the contents of the intestinal canal of habitual spirit drinkers.

Dr. Schultz is of opinion, that the primary action of ardent spirits is upon the organs of vegetative life. Two points connected with the subject have especially attracted his attention:—1*st*, The influence of ardent spirits on the bile, and its consequences. 2*d*, Their influence on the coloring matter of the blood, and on the envelope of the blood corpuscles.

If alcohol is added to bile, and the solution evaporated for a short time, the bile loses its alkaline reaction; it likewise ceases to be precipitated by vinegar, dilute sulphuric or muriatic acids, or by solutions of oxalic or phosphoric acids. The sour contents of the stomach of rabbits, dogs, and oxen, throw down no precipitate from the bile of oxen, when mixed with alcohol, and a long time is requisite for neutralizing the acid, while sometimes that change does not take place at all, if the bile and accohol have been long mixed together. This fact throws a new light on the disordered digestion of drunkards, and especially upon the generation of acid in the stomach, and the sour eructations to which they are so especially liable. But the bile is not only directly subservient to digestion, for it contains besides a number of excrementitious matters. In the healthy state these matters are got rid of by being precipitated in insoluble flocculi, which are then voided with the feces. The alcoholic solution of bile is not precipitated by acids, or by the contents of the stomach, or but very imperfectly, and consequently these excrementitious matters are retained in a state of solution in the intestinal canal, and become mixed with the chyle. The occurrence of jaundice, and many of the icteric symptoms to which drunkards are liable, may be partly explained, by supposing some of this morbid bile to become absorbed, and to enter the circulation.

It has long been known that a great part of the ardent spirits taken into the stomach, is absorbed unchanged, and that

alcohol thus finds its way into the blood. Hitherto, however, persons have contented themselves with saying, that the blood has more of the characters of venous blood than natural, and they have not inquired which of the constituents of the fluid undergoes the morbid change. Professor Schultz has made the following experiments:—If a small quantity of spirits of wine is added to fresh blood, the fluid becomes transparent, and its natural color changes to a cherry red, but it does not become blacker, as is commonly asserted. If the blood is now examined under the microscope, it will be seen that the coloring matter generally is changing its situation, and, instead of being contained in the blood corpuscles, becomes gradually diffused through the plasina. Thus, (if the alcohol is added to blood deprived of its fibrine,) in the course of a short time, instead of colored corpuscles floating in a colorless plasina, the red plasina will be seen to contain colorless corpuscles. If the spirits are added to fresh blood capable of coagulating, the red plasina will form into a gelatiniform substance of the consistence of thick milk, and no separation into crassamentum and serum will afterwards take place. If half the quantity of spirit is added to the blood, coagulation of the plasina, or of the albumen of the serum, in cases where the blood has been deprived of its serum, at once takes place, and forms a mass of the consistence of cheese. These alterations are produced by injecting spirit into the veins of living animals, as well as by adding it to blood out of the body, and instant death of the animal takes place, although the change of the blood does not extend beyond that part of the venous system into which the injection is thrown. The changes in the capsule of the blood globules likewise merit attention. They lose their color gradually, and contract more or less in size according to the quantity of alcohol added. In some instances the blood corpuscles contract almost to a point, and become nearly undistinguishable, so that the blood appears to be a uniformly-transparent red fluid, without any globules. The newly-formed corpuscles undergo these changes most rapidly, while the alterations take place much more slowly in the larger globules, which contain more coloring matter.

The changes which the blood undergoes, are not directly chemical, for alcohol does not dissolve the coloring matter, but the corpuscles seem to lose it owing to their contraction. The constituents of the blood, then, are not actually decomposed, as was formerly imagined; but the results of the action of alcohol are not on that account less pernicious. The process of restoration is dependent on the normal condition of

the blood corpuscles, since they are the media through which the mutual changes in the air and blood are effected. The state of the coloring matter is also a point of great importance, as is evident from the striking changes which the air produces, and which are so marked that we look on the alteration of color as the chief point of difference between venous and arterial blood. But both the contractility of the blood globules and their contents, are greatly modified by the action of spirits on the blood. Thus we arrive at an explanation of the alterations in the respiratory process of the habitual spirit drinkers, which result principally from the proper changes not taking place in the blood corpuscles and their contents. Less oxygen than natural is absorbed, hence less carbonic acid is exhaled, and the blood assumes a venous character, though one widely differing from that which the narcotic gases produce, since they produce a dilatation of the blood globules, and an accumulation of coloring matter within them.

From these alterations Professor Schultz deduces the various morbid conditions of the nutritive process incidental to spirit drinkers. The action of spirit on the nervous system is usually physiological rather than pathological. Delirium tremens indeed is the result of a pathological process; not however of exhaustion consequent on over-irritation of the brain and nerves, but rather of a destruction of their excitability, owing to the morbid changes in the blood.—*Monthly Jour. Med. Sci.* Oct. 1841, from *Hufeland's Journal*, Apr. 1841.

Absence of the Uterus. By. Dr. Bertani.—Caroline Fossati, twenty years of age, when on the point of marriage, came to the hospital at Nular, to be treated for amenorrhœa. It was then ascertained that she had never menstruated, nor ever had had bloody discharge from any part of her body, which could supply the place of that secretion. Upon examination, the labia and nymphæ were found to be well formed. The clitoris was somewhat small. The urethra was in its natural situation, and of its ordinary shape. Below it, the carunculæ were in the form of an ellipsis, and appeared to surround the orifice of the vagina. On separating them, the mucous membrane was seen to be continuous, and not dilatable, scarcely yielding when a sound was pushed against it. Upon introducing a finger into the rectum, and an instrument into the bladder, they were found to be separated by no great thickness of parts. On examining all sides of the bladder

with the sound, and depressing with the finger the abdominal parieties, no trace of a uterus or vagina could be detected.

The carriage and voice of Fossati were somewhat masculine. Her breasts began to appear at thirteen. There was hair on the pubes at fourteen; and at fifteen she had some abdominal pain in the loins and hypogastrium, which returned every month, but never with any discharge. Upon being told that she could not marry, she appeared not to suffer any grief. She had no sexual appetite. In other respects her tastes and desires were feminine.—*Jour. de Med. et de Chirurg. Prat.*, Nov. 1841, from *Annali Univers. di Med.* 1841.

Rotatory Movements of the Yolk in the Ovum of Mammalia, during its passage through the Fallopian tube.—The attention of Prof. Bischoff of Heidelberg was called to this phenomenon by an observation of Dr. Martin Barry in the Philosopical Transactions for 1839. Dr. Barry there mentions having on one occasion met with an elliptical vesicle (filled with a transparent fluid in which were small elliptical granules), adherent to the mucous membrane of the Fallopian tube. In the centre of this vesicle was a mulberry-like body which continued rotating itself for half an hour, the rotation subsiding by degrees into a tremulous motion. Professor Bischoff was of opinion that this vesicle was an ovum and the rotating body its yolk, and he adduces an observation in corroboration of this suppposition.

Having carefully laid open, with a pair of scissors, the Fallopian tubes of a rabbit, which had been placed with a male during the previous eight days, he found four ova close together about the middle of the tube of the left side. Within the zona pellucida of these ova was the yolk which, however, did not completely occupy its area, but between the yolk and the inner surface of the zona a transparent fluid intervened. In this fluid each yolk ball continually rotated on its own axis, in the direction from the uterus to the ovary. On examining the ova with a power of 800 diameters, the surface of the yolk was seen to be furnished with very minute ciliæ, by the vibration of which this movement was effected. Professor Bischoff convinced himself, by very careful examination, that the ova themselves remained perfectly still during the continuance of this rotatory motion of the yolk, which ceased on the preparation being moistened, in order to prevent the ova from drying up.

In this phenomenon Professor Bischoff sees a fresh point of coincidence between the processes of developement in mammalia and in other animals, since similar rotatory movements of the yolk have been observed in the ova of mollusca and polyps, and recently by Von Siebold and Ehrenberg in those of medusa aurita.—*L. and E. Monthly Jour. Med. Sci.*, Oct. 1841, from *Muller's Archives*, Heft. 1, 1841.

Composition of False Membranes.—M. Andral has clearly shown that the quantity of fibrin in the blood is increased during inflammation, and that the proportions of this substance bear a close relation to the different degrees and stages of the inflammatory affection with which it is connected. Some recent researches on the composition of false membranes, by M. Lassaigne, throw additional light on this interesting subject.

I have already (says Mr. Lassaigne) shown that the false membranes which are thrown out on mucous membranes in a high state of inflammation, are not composed of coagulated albumen, as many anatomists have supposed, but formed chiefly of a large proportion of fibrin, mixed with some soluble albumen, and moistened by a yellow colored serum, containing all the organic and inorganic elements of the blood. I have, more recently, examined the false membrane in a pig laboring under pseudo-membranous angina, and obtained the same results. The false membranes, obtained from this source, were white with a yellowish tinge, slightly elastic and extensible. On submitting them to pressure, I obtained a viscid yellowish fluid, which turned test-paper blue, and coagulated under the influence of heat and mineral acids.

A portion of the false membrane was frequently washed in cold water, to remove all the soluble matter; the residuum was a white substance, which presented all the physical and chemical characters of fibrin extracted from the blood. When digested with weak acetic acid, it became swollen, then transparent, and was entirely dissolved on the application of gentle heat. The solution, when saturated with caustic potassa, threw down white flocci, which were again dissolved by an excess of the alkali. Concentrated sulphuric, nitric, muriatic acids, and the solution of the ferro-cyanuret of potassium, threw down a white precipitate, as they do with the acetic solution of fibrin.

The water in which the false membranes were washed,

was now evaporated, and there remained flocci of coagulated albumen; on continuing the evaporation to dryness, there remained a saline residuum, composed of chloride of sodium, carbonate and lactate of soda, and a little phosphate of soda, salts which exist in solution in the serum of the blood.

From these facts we may conclude, 1st. That the false membranes thrown out by serous and mucous membranes in a state of inflammation, are principally composed of the fibrin of the blood. 2. That this principle, being separated from the circulating fluid, together with a small quantity of albumen, becomes organized, and thus gives rise to the morbid products alluded to.—*Prov. Med. Jour.*, from *Journal de Chimie, June* 1840.

Evolution of Tubercle.—Dr. C. Haller has had ample opportunity of observing the various forms in which tubercles in the lungs are evolved, in the House of Correction, Vienna, where phthisis is extremely common, "where *lung-tuberculosis* is endemic," as the author says. Here, as everywhere else, the most common of all the forms of tubercular development in the lungs, is, 1st, that of a *bronchial catarrh*, or seemingly simple cough, with or without febrile symptoms, and accompanied either with very little or no expectoration; 2d, often the disease commenced in the guise of *pneumonia;* 3d, still more frequently it assumed the appearance of a common continued fever; and, 4th, in rare instances it presented itself with the perfect tertian or quotidian intermittent type.

The first form is sufficiently well known—description has been exhausted in regard to it. But the form in which pneumonia is simulated, has attracted less attention. Here violent fever, with great dyspnœa, or rather breathlessness, a sensation as if a load lay upon the breast, without much or any positive pain referred to a particular spot, distressing and almost dry cough attacking in fits, violent action of the heart, with an accelerated, hard, and often irregular pulse, a burning skin, great sense of depression, and rapid sinking—all the symptoms, in short, indicating acute pneumonia; but this diagnosis is not borne out by the information conveyed by auscultation and percussion. The chest sounds well everywhere; it is even tympanitic in its tone. The respiratory murmur is appreciable at every part, only somewhat rough, with occasional small, but, by degrees, increasing, mucous rattle; in a word, auscultation and percussion lead only to negative results.

The symptoms continue for several days unabated either by blood-letting or the treatment generally followed under the same circumstances, and, so far as symptoms are concerned, with success; though, if the exudation of tubercular matter be extensive, the patient may be lost within from a week to a fortnight. If the tubercular exudation have been limited to the upper part of the lungs, the symptoms are less severe, and there is less immediate and apparent danger; the dyspnœa becomes less by degrees, the cough becomes moister, but the febrile state continues long, and, when it ends, it is without a crisis of any kind. The little relief procured by blood-letting, the great amount of dyspnœa, the slight indications of inflammation presented by the blood that is abstracted, the negative results of auscultation, the pertinacity of the fever, and the want of critical phenomena, particularly by urine, suffice to distinguish this disease from true pneumonia.

From proper typhus fever the diagnosis of tubercular formation is more difficult. But the disease in this case is always preceded for a long time by a greater or less amount of indisposition. The patient feels an extraordinary degree of languor, and has an extremely irritable and variable pulse; the heart and vascular system are greatly excited without any apparently sufficient reason, inasmuch as no organ in especial seems to suffer. Nervous symptoms are, at the same time, manifested; confusion of thought, rambling talk in the night, dry tongue, burning thirst, hot dry skin, trembling of the extremities,—the symptoms, in a word, are those that usher in an attack of common continued fever; but they do not increase in intensity, and after about a fortnight, the patient begins to hack and cough; the nervous symptoms abate, and now it becomes obvious that he is laboring under a serious affection of the chest, which, in the event of the tubercular exudation, which is its element, having been extensive, carries him off in the course of a few weeks in what is called a *galloping consumption*.

Dr. Haller also observed the primary formation of tubercle to take place upon several occasions, along with symptoms of the well-marked intermittent febrile type. But as the qualities of air and soil that give diseases an intermitting character are wanting in this country, we shall not follow the writer here.

With his excellent opportunities of observing incipient tuberculosis, Dr. Haller is enabled from certain signs to perceive the disease before it appears, and when it is only threatened. These signs are mental and corporeal. Those who are about to become the victims of tuberculation of the lung, are

either greatly depressed and miserable, or they show a singular irritability and changeableness of disposition. The sleep is generally disturbed by distressing dreams. The subject of observation loses his healthy look and gets thin; sometimes the appetite is increased, sometimes it is greatly diminished; the digestion is imperfect, the bowels are moved more frequently, and the evacuations are larger than usual. Frequently the most remarkable symptoms are referable to disturbance of the circulation; there are symptoms of determination to the head, vertigo, headache; now and then epistaxis, and the individual is subject to change of color constantly; there are symptoms of congestion about the chest, a passing sense of oppression, some cough, perhaps slight hæmoptysis, though this occurs for the most part at a subsequent period; palpitation readily excited, and so obstinate as often to cause suspicions of organic diseases of the heart; indeed, it is only by the use of the stethoscope that the true state of affairs can be discovered.—*Lond. and Edin. Monthly Jour. of Sci.*, Nov. 1841, from *Med. Jahrb. des Œsterreich, Staates*, July, 1841.

M. Raciborski on the Physiology of Menstruation.—Our readers will remember that in our recent review of Gendrin's *Traite Philosophique*, we drew their attention to this curious and hitherto ill-understood subject of physiological inquiry. From the researches of this gentleman, and from those of M. Negrier, as well as of Dr. Robert Lee, it was suggested that there is an actual rupture of one of the ovarian vesicles at each period of menstruation, and that the sanguineous discharge from the uterus was the result of this lesion. M. Raciborski questions the accuracy of this statement. While he admits that the primary movement in each act of menstruation is a congestion of the vessels of the ovaries, he denies that any rupture of their surface necessarily takes place at the same time.

M. Raciborski sums up the conclusions to which he has come, after a very elaborate inquiry, in the following propositions:—

1. That menstruation is a consequence of the accomplishment of the development of the ovaries.

2. That it is the direct result of the means employed by nature to place the ends of the Fallopian tubes and the ovaries in the relations necessary to fecundation and the passage of the fecundated ova.

3. That the sanguineous congestion, which is indispensable for obtaining those conditions in the human being, appears sufficient in itself to explain the occurrence of the hæmorrhage which constitutes menstruation—without having recourse to supposing that there is any necessary solution of continuity.

4. That the vertical position, favoring still more the effects of sanguineous congestion on the generative organs, may be one of the principal reasons of the abundance of the menstrual flux in women, and in some species of simiæ.

5. That, for want of having precise information as to the nature and theory of menstruation, it has been hitherto impossible to establish a rational treatment of the various disorders induced by irregularities of this function.

6. That it is not yet sufficiently proved that the ovula arrive successively to maturity at each menstrual epoch, or that the most mature ovum then approaches nearest the surface of the ovarium, there to become ruptured and give exit to a germ.—*Med. Chir. Rev. Oct.* 1841, *from L'Experience.*

Physiology of Conception.—We find the following interesting case in the November number of the *Archives Generales de Medicine*, where it is credited to Riecke's Prussian Medical Gazette.

A girl aged twenty eight, servant in the family of a peasant, had for some time been suspected of a criminal intimacy with her master—her mistress at length surprised them in *flagrante delicto* and turned the girl away—two days after this the dead body of the unfortunate girl was found in a neighboring pond, an autopsy was ordered by the magistrate, and the organs of generation were found in the following condition:

The labia majora were a little tumified, the hymen very much stretched and recently torn, much mucus in the vagina. The bladder, rectum, and other pelvic organs, were very much injected, the uterus was of a deep red color and more than one third larger than in the normal state. The cavity of the organ which was also increased in size was filled with a sanguinolent mucus, of which that portion immediately in contact with the walls of the uterus was most consistent. The lining membrane was red and soft. The right fallopian tube was red, and its size about three times greater than in the normal condition; it was swollen in the middle. A pretty large

sound (*un sonde assez epaisse*) penetrated the canal with ease and encountered no obstacle till it reached the uterine extremity of the tube where the swelling existed; the cavity of the tube was filled with a white fluid. The right ovary was double the size of the other, it was embraced by the fimbriæ of the fallopian tube and appeared very much injected.

We observed upon its surface two chinks of the size of a lentil, and very red at the bottom. From each of these issued a delicate membrane half an inch long, and bearing at its extremity a small ovule (petite œuf) about the size of a grain of mustard seed. Each of these ovules presented, even to the naked eye, upon their surfaces, a net work of vessels very distinct indeed; they contained a transparent fluid. The ovary having been laid open, we found within it a red coagulum granular towards the centre; this coagulum communicated with the chinks before mentioned.

From these facts the presumption was, that conception took place two days before, but it was impossible to arrive at any thing like certainty.

Remarks.—This case is one of the most valuable yet recorded in the illustration of the physiology of conception. It is exceedingly to be regretted that no microscopic examination of the ovule was made; some of the vexed questions of obstetrics might possibly have been settled, had these minute ovules been subjected to accurate examination—particularly as to whether the ovule has two coats, as obstetric writers generally have taught, or three as Von Baer asserts, or only one as some of the late physiologists pretend, the chorion, according to their view, being a capsule added to the ovum during its transit through the Fallopian tube. The excessive vascularly observed in this case in all the pelvic organs and especially in the uterus is very interesting; how well it illustrates the remark of Breschet, that the formative process, like the reparative, partakes largely of the character of inflammation. The state of the sanguinolent mucus by which the uterus was occupied, fluid in the centre and becoming of more solid consistence upon the uterine wall, shows us very distinctly how the decidua is formed, and why it happens that this shut sac when fully developed should contain a fluid in its cavity. The sanguinolent mucus is separated into two parts, a soft solid immediately applied upon the uterine wall and there forming the decidua (perione of Breschet,) and a fluid, the hydro-perione of Breschet, occupying the cavity of the membrane.—*N. Y. Med. Gaz.*

Diagnosis of Inflammation of the grey, and the white matter of the Brain.—Prof. Bellengeri gives the following diagnostics to enable us to decide what part of the brain is inflamed. The white matter is the organ of motion, the grey of sensation and intellect—hence when the grey matter is irritated or inflamed, the intellectual faculties are disturbed with loquacity, and delirium; the senses, especially those of touch, are dull. Cerebral congestion in consequence of the compression it produces upon this substance, produces numbness and somnolency. When the white matter is affected, there is a lesion of the motive apparatus, spasms or paralysis, especially if the optic thalami, the corpora striata, or the cerebellum is attacked.

If the disease is not intense there is spasm, but if it is, then paralysis occurs. Spasms of the flexor muscles (*emprosthotonos*), indicates an affection of the cerebral hemispheres, spasm of the extensors (*opisthotonos*), one of the cerebellum. When the senses and the motor apparatus are alike affected, we should conclude that the lesion extended to both the white and grey matter. Diseases of the spinal marrow easily affect the motion because the white matter abounds there. To prove this fact the Professor relies upon the cases of Royer, Collard, Bayle, Rullier, &c. He believes, contrary to the opinion of Bell, that the posterior columns regulate motion, the anterior sensation. Simple pain in the head, particularly when severe, and not accompanied by delirium, torpor or spasm, indicates a lesion confined to the membranes, the dura mater, pia mater or arachnoid; encephalitis, accompanied by delirium, indicates that inflammation is seated in the grey matter of the brain, especially on the periphery of the organ. It is true that in encephalitis with delirium, whether acute or chronic, autopsy often reveals inflammation of the membranes, but the author believes that the delirium should not be attributed to the affection of the membranes, but to its being propagated to the grey matter of the substance of the brain, which is contiguous to the membranes.

As all the superficies whether external or internal, is covered with a pia mater, we cannot conceive of inflammation limited to the grey or the white matter, and not propagated to the membrane from which they derive their vessels. There cannot, therefore, be there a phlogosis of the cerebral substance without meningitis. In comatose or apoplectic encephalitis, the disease whether phlogosis or congestion, attacks the deeper seated portions of the grey matter; if it follow a phlogosis, its intensity indicates the severity of the disease

and the need of further depletion, unless it depend on serous effusion which can be recognized by symptoms, and requires appropriate treatment. Convulsive, spasmodic or paralytic encephalitis, indicates an affection of the medullary (white) matter.—*N. Y. Med. Gaz. from the Jour. des Sciences Med. de Turin.*

Clinical Remarks by Dr. Marshall Hall, *on the Use of Setons.*—Many years ago, I was consulted by Mr. Doubleday, of Blackfriars Road, in the case of a young married lady who had suffered from peritonitis after her first accouchment.

This peritonitis appeared to be confined to the pelvic region. Its acute character had been subdued, but tenderness, with tumidity, and difficulty in voiding the bladder and rectum remained. I made a careful examination. A distinct hardness was felt under the pubes, extending to one side, I think the left. On examination per vaginam and per rectum, a similar hardness was found occupying the lower part of the pelvis. I imagined this hardness to consist in coagulable lymph, effused from the inflamed peritoneal surfaces of the pelvis, producing the symptoms by its pressure on the neck of the bladder and on the rectum.

We strictly regulated the diet and the intestines, and inserted an ample seton over the induration. Slowly and gradually that induration, with its attendant symptoms, became diminished, and eventually disappeared.

Several years after this, I was consulted in the case of the sister-in-law of this patient, under very nearly similar circumstances. The same remedy was followed by the same happy result.

A year ago I was consulted by Mr. Burford, in the case of a gentleman of sixty, who had become affected with pain, tenderness, and tumidity of the abdomen. On a careful examination, a distinct hardness was felt in the midst of the general tumidity, occupying the region of the caput cœcum coli. We regulated the diet and the bowels, administered mercury, and inserted an ample seton. The mouth became affected, and the seton discharged copiously: the hardness and the other symptoms gradually, but at length entirely disappeared

A similar case occurred a year ago, in the person of a gentleman of forty, a patient of Mr. Squibb, in Orchard street. A strict regimen was enjoined, the bowels regulated, and an

ample seton was inserted. The induration, which in this case occupied the space between the false ribs and the ilium, on the left side, gradually disappeared.

Two years ago I was consulted by Mr. P———, a barrister, affected with pneumonia of the middle and upper lobes of the right lung. A seton was inserted, and Mr. P——— went to Madeira. On his return, the physical signs and the symptoms of pneumonia had disappeared.

I have still more recently treated a case of pneumonia of the upper part of the right lung, in consultation with Mr. Beane of Peckham. A seton was inserted, and in six weeks a most decided amendment in the physical signs, the symptoms, and the general health occurred. Since that period the patient has continued to improve, and now no dullness on percussion, or other signs of disease, is perceptible.

In a variety of cases of acute or chronic, local or limited internal inflammation, I have had recourse to the seton, and uniformly with the most marked success; so that, I think, we may look upon the remedy as almost specific in such cases. It is unnecessary to enumerate them. But hepatitis and nephritis belong to them in an especial manner, and I would suggest this remedy as likely to be of service (if any remedy can) in the case of albuminous urine. In one such case the urine was more albuminous after cupping. I imagined the effect arose from the mechanical violence inflicted, and recommended the cupping to be performed above and below the precise region of the kidneys. Under the use of this remedy the albumen diminished, and even ceased for a time.

These and other cases, then, induce me to think that there can be little doubt of the real efficacy of the seton in chronic inflammation. The object is to demonstrate this in some measure, and then to notice briefly farther applications of the remedy. I do not pretend to suggest any thing new, but rather to enforce what is old. The efficacy of setons, when appropriately applied in the nucha (for they are frequently employed very uselessly), is well known. The proper cases are inflammation and congestion. But the case to which I would particularly draw attention is that of disease of the spinal marrow, with paraplegia, or paraplegic spasm.

In this case issues are generally inserted. They appear to me far more painful, far less manageable, and far less efficacious than ample setons. They have also, I am persuaded, been generally applied below the real seat of the disease. I was consulted a few weeks ago by a gentleman from Manchester. With partial loss of power, he had loss of sensation

in the lower extremities; the numbness extended to a line just above the sacrum. Issues had been applied on each side of this line. They might, with equal efficacy, have been applied to the foot! I need not say that the spinal nerves proceed, for some distance, from above directly, rather than obliquely, downwards, and that the seat of the disease is *at* or ABOVE their junction (insertion or origin) with the spinal marrow.

Bearing these two principles in mind, then, viz. that ample setons afford a more efficacious counter irritation than issues, and that they ought to be applied higher along the spinal column than has been usual, I think we have a new mode of treatment for this formidable class of diseases.

These setons should, besides, be larger than usual. They should be three-fourths of an inch in breadth, and extend through two inches in length, be inserted on the level with and above the supposed seat of the disease (the anatomy being consulted), and be four or six in number, two or three being instituted on each side of the spinal column. Acting on this principle, I had, five days ago, the pleasure to receive the most satifactory account of a patient affected with paraplegia whom I had seen at Lohan, in Essex, in consultation with Mr. Gross.

I repeat, and beg to conclude by repeating, that I believe counter irritation applied along the spine has failed, because it has been applied below the seat of the disease; and that, to be efficacious, it must be both more efficient in itself, and applied with greater regard to the anatomy of the spinal marrow and nerves. The precise spot for their application must be left to the well-informed practitioner. I need scarcely remind my reader, that the persistence or cessation of all reflex actions, will determine whether our remedies should be applied above or below the origin of the cauda equina, above or below the last dorsal vertebra.

We are great advocates for setons too. We confess we have not used them so broad nor so many at a time as our friend Dr. Hall. But perhaps he is right. The difficulty would be, in some cases, to induce patients to submit to their introduction.

We have tried setons in three or four cases of albuminous urine. They were bad cases certainly, and the effect was not encouraging.—*London Medico-Chirurgical Review*, from *London and Edinburgh Journal of Med. Science, No.* 11.

Reduction of Luxations of the Thigh.—The Journal of the Medical Society of Montpelier, contains a memoir on a new method of of reducing luxations of the thigh. This method was first proposed by M. Collin in an inaugural thesis presented to the Faculty of Medicine at Montpelier in 1832, and is now advocated by M. Jaumes, of the same place, who gives some very striking cases. We content ourselves with giving a sketch of the plan; its simplicity commends it to a trial, at least, and if it be found as useful in other hands as in those of M. Collin, he will certainly have conferred a benefit upon science.

It is first necessary to put the patient on a plank strong enough to sustain the weight of the body; the width should be about two feet, the length somewhat to exceed that of the trunk; in this plank four holes are to be bored near the four corners, through which cords are to be passed so as to suspend it about four feet from the ground; the cords, at one end, to be six inches shorter than those at the other, so that one end of the plank shall be six inches higher than the other. This plank being covered with a thin, firm mattrass or other like bedding, the patient is to be placed upon it. flat on his belly, the arms to hang down on either side, the pelvis situated at the highest end of the plank, rests upon the anterior superior illiac spines, the lower extremities hang over the end of the plank so as to form an angle slightly acute with the body. The patient should be allowed to remain in this position a short time without any efforts being made by way of traction on the dislocated limb; the position alone, merely by the weight of the limb, in one of M. Collins cases, restored the dislocated bone. If this does not happen, slight traction may be made *directly downwards*; if this fail, weights may be attached to the limb, a towel being tied round the ankle, and forming a bag beneath the foot, into which weights may be placed. Such is the simple apparatus and the mode of using it, by which M. Collin asserts that he has reduced several cases; one that had resisted extension and counter extension for hours. The plan will, of course, only apply to luxations backwards and upwards on the dorsum of the ileum. M. Jaumes enters into a long argument to prove the reasonableness of this plan; this we shall not translate. The plan has been tried and succeeded; it is simple and painless; let it be tried again,—*N. Y. Med. Gazette.*

Reduction of a Prolapsus Uteri after sixteen years' continuance.—M. Durant records an interesting case of this in the Transactions of the Medical Society of Ghent. The womb protruding beyond the external parts, and covered by the inverted vagina, presented a globular tumor, round, and contracted at its origin into the form of a circular appendix. The *os uteri* was clear at its inferior part. The tumor at its middle part was fifteen and a half inches in circumference. Its external surface was brownish red, and covered with crusts and ulcerations. The long continuance of the affection had seriously injured the general health of the patient—she was pale and emaciated, and subject to sleeplessness, and cramps of the stomach.

Mr. Durant, before attempting reduction, kept the patient on light diet, and at rest in bed in a proper position; at the same time dressing the tumor with opiated emollient fomentations. Its surface speedily softened, and the crusts fell off, leaving superficial sores. After six days of this treatment the operation was performed. It having been ascertained that the rectum and bladder were empty, the patient was placed in the position most advantageous for the entrance of the womb. M. D. then introduced the right forefinger into the os uteri, and burying it, pushed upwards in the axis of the tumor which itself was placed in the axis of the true pelvis—then retaining the uterus in its place with the left hand, withdrew the finger, and, repeating this manipulation with gentleness, just as one turns the finger of a glove outside in, accomplished the reduction in less than half an hour. He then inserted into the vagina a sponge, cut into the form of a cylinder, and saturated with an emollient decoction, the thick end being highest up, and a cord attached to the other, for the purpose of removing it at pleasure. This sponge-pessary was retained in its place by means of compresses, and the T bandage. The patient did well, speedily gaining flesh and strength. During the after-treatment, which continued for about six weeks, emollient and astringent lotions were employed, and an ordinary-sized caoutchouc ring-shaped pessary was used, the saturated sponge and the injections being passed through its centre.—*Am. Jour. Med. Sci.*, from *Journ. de Med. et de Chirurg. Prat.* Feb. 1841.

Union of Fractured Bones.—The following cases which we extract from a paper published by A. Thierry, in L'Experience, Nov. 4, 1841, are curious and also practically important, as illustrating the dependence of the reparative pro-

cess on the state of general health. The fact that the existence of a venereal taint in the system will so seriously interfere with the formation of a callus, and the consolidation of the fractured bone, is new to us.

Case 1. M. aged 13, clerk in a wine store, fractured both bones of the fore-arm in descending into the vaults. The apparatus of Boyer was applied, and at the end of sixty days removed, the union being supposed to be perfect. On examination the consolidation was not complete, yet this young man enjoyed good health, and there was nothing to explain why the fracture did not unite. The patient was closely watched and it was soon discovered that the girl who nursed him, afforded him from time to time a physical solace for his ennui; she was discharged, the apparatus re-applied for sixty days and the consolidation was complete.

Case 2. A school boy of 14 had the arm broken by the fall of a bench. The displacement was inconsiderable, the fracture was reduced and put in the old apparatus; on removing the dresssings, the bone had not united. The boy was watched and it was discovered that he was addicted to masturbation. The apparatus was re-applied and means taken to prevent his recurring to his old habit. The cure was complete.

Case 3. M. D. making a false step in the street, fell and fractured the thigh above the great trochanter. The fracture was reduced and the apparatus of Boyer applied. At the end of sixty days, on removing the apparatus, the bone had not united. The patient was asked whether he had not some venereal affection; on his replying in the affirmative an antivenereal course was pursued, the apparatus was re-applied, and in twenty four days the fracture was consolidated.—*N. Y. Med. Gaz.*

Ergot.—Dr. Wright inclines to the opinion that the formation of this excrescence is owing to the combined influence of atmospheric heat and moisture. He is confirmed in this opinion by ergot being much more common in the district of Soloyre—a moist, rich soil, hot and sheltered—than elsewhere. Grains also occur, only one half of which is ergotted, an insuperable objection to the notion that ergot is produced by the growth of a fungus, which would of course attack all parts of the grain. Besides, from his own experiments, he finds that ergot in powder or grains, sowed with rye, fails to produce the disease in the growing plant. Wa-

tering the growing plants freely, with water in which ergot had been steeped, failed in like manner; so did the application of ergot to the growing ears of rye. The excresence remarked at the upper extremity of the grain, he regards as the *stigmata* altered by disease.

Dr. Wright's conclusions were further confirmed by discovering that ergot contains a considerable quantity (26 per cent.) of fecula, which it would not do if the disease was produced by fungus. Dr. Wright has the merit of discovering fecula in ergot—no previous analyst makes mention of it.—*N. Y. Med. Gaz. from Ed. Med. & Surg. Jour.*

Feigned Hysteria—Some of the shapes assumed by this pathological proteus are hideous and disgusting. Paralysis of the muscular fibres of the bladder, or spasm of its sphincters, sometimes really occurs; sometimes it is only aped, in hysteria. It is a common trick with these patients to pretend that they labor under *retention of urine*, and that, although the bladder is full, they cannot make water. The daily introduction of the catheter by a dresser or apprentice, appears to gratify their morbid or prurient feelings. Sometimes, no doubt, the difficulty is real, but it is oftener feigned or exaggerated. I have again and again known it to disappear, upon the patient's being left, without pity, to her own resources. But girls have been known to drink their urine, in order to conceal the fact of their having been obliged and able to void it. The state of mind evinced by many of these hysterical young persons, is such as to entitle them to our deepest commiseration. The deceptive appearances displayed in the bodily functions and feelings find their counterpart in the mental. The patients are deceitful, perverse and obstinate, practising, or attempting to practice, the most aimless and unnatural impositions. They will produce fragments of common gravel, and assert that these were voided with the urine, or they will secrete cinders and stones in the vagina, and pretend to be suffering under some calculous disease. A young woman contrived, in one of our hospitals, to make the surgeons believe that she had *stone in the bladder*, and she actually submitted to be placed on the operating table, and to be tied up in the posture for lithotomy, before a theatre full of students, and then the imposture was detected. Sometimes they simulate *suppression of urine*, and after swallowing what they have passed, vomit it up

again, to induce the belief that the secretion has taken place through a new and unnatural channel.

It is impossible, I say, not to pity the unhappy victims of this wretched disorder, when their morbid propensities drive them to such acts as these. I mention them, because you must expect to meet with such cases, and because, while you take care not to express your suspicions prematurely, or on light evidence, you should be on your guard against the mortification of being deceived, by the false signals held out, into active and ill directed measures of treatment.—*Dr. Watson's Lectures on the Practice of Medicine*, in *Lond. Med. Gazette*, June 11, 1841.

Poisoning by the Vapors of Antimony.—M. Lohmeier, of Schonebeck, has recorded in the Nos. of *Casper's Wochenschrift* for April and May 1840, the history of four patients who were frequently exposed to the vapors of antimony, in an establishment where there were prepared on the large scale tartrate of antimony, butter and glass of antimony, and other antimonial preparations, during the preparation of which were disengaged abundant vapors of antimonious and antimonic acid, and chloride of antimony.

The four patients presented the following symptoms. Pain in the head; lancinating pain along the edge of the ribs and in the back; difficult respiration with mucous and sibilous rattles over the chest; difficult expectoration of tenacious mucus; sleeplessness, anorexia, diarrhœa, profuse perspirations, and general weakness; dysuria with a mucous discharge, causing a burning feeling in the urethra; flaccidity of the penis, with loss of the sexual appetite, and even complete impotence; pain in the testicles, and atrophy of these organs, as well as of the penis; pustules over different parts of the body, but especially on the thighs and scrotum.

M. Lohmeier observes, that in none of the recorded cases of poisoning by antimony, has the peculiar affection of the medicines on the sexual organs been discovered, nor yet its effect in exciting a peculiar cutaneous eruption; but it is remarked that the homœopathists have noticed this on the generative organs, and that its preparations are habitually administered to animals by agriculturalists to hasten their fattening, when it probably acts by diminishing the sexual appetite; and lastly, that it appears to have been used by monks in the monasteries with the view of diminishing their sexual propensities, and hence its name of antimony, from *moine*, a monk.

The curative means used by Mr. Lohmeier were the free use of antiphlogistics in the first place, and afterwards the internal administration of opium, tannin, and quinine, with lotions of the same applied to the parts externally affected, and milk diet. If the functions of the sexual organs did not return naturally as the other affections abated, he recommended the use of tincture of cantharides united with opiates, and lotions of cold water to the scrotum.—*B. and F. Med. Rev.*, Oct. 1840, and *Edin. Med. and Surg. Journ.* Jan. 1841.

Beneficial Effects of Narcotism in some obstinate cases of Neuralgia.—M. Levrat read to the Academy of Medicine at their meeting of the 8th of June last, a memoir on this subject. From the results of his long practice, it appears that opium given to the extent of producing narcotism, often cures cases of neuralgia which have resisted the most varied and most active treatment. This mode of treatment may appear alarming at first, but when directed by a physician who can watch the progress of the phenomena, regulate the administration of the drug, and combat its effects when excessive, it is not dangerous. Five cases successfully treated by this method were related.

Remedies against Relapse in Intermittent Fever.—In a case of intermittent fever, which yielded readily enough to the usual remedies, but always returned when these were given up, Dr. Kuntzmann of Berlin saw the disease effectually subdued by the exhibition of a table-spoonful of the powdered stem of the pumpkin, in half a table-spoonful of tincture of wormwood. This dose was given every day at the same hour, and when indications of an approaching paroxysm were experienced. Dr. Osann says, that relapses of intermittent fever are best prevented by the use of the Tinct. Absinthii, which he has long been in the habit of prescribing, along with an equal quantity of the Tinct. Cinchon. Compos.—*Lond. and Monthly Jour. Med. Sci*, Nov. 1841, from *Hufeland's Journal*, June 1841.

Treatment of Scrofulous affections by the preparations of Walnut leaves.—M. Negrier of Angiers has used the above remedy in scrofulous children, nine of whom had osseous enlargements with caries; seven ulcerated glands; one several

swollen cervical glands with scrofulous ophthalmia of both eyes. Each patient took daily two or three cups of infusion of bruised walnut leaves sweetened with sugar or honey, and a four-grain pill of the extract of the leaves, or a spoonful of a syrup prepared with eight grains of the same extract to ten drachms of syrup. All the sores were washed with a strong decoction of the leaves, and covered with linen compresses steeped in this decoction, or poultices made with flour and the decoction. Seven of the patients were completely cured after six months of this treatment, and five nearly so: and Mr. Negrier concludes that the walnut leaves are superior to all other antiscrofulous remedies.—*Brit. and For. Med. Rev.* Oct. 1841, from *Bull. Gén. de Thérap.* May 1841.

Prevention of Tubercles.—M. Coster has submitted several animals to various experiments, for the purpose of determining how far the formation of tubercles may be prevented by diet, but principally by the administration of medicines with their food. Some rabbits were fed in the open air, and in the usual manner; another set were shut up in narrow boxes, in a cold, moist place, and deprived of light, air, &c.; they were fed on potatoes, turnips, &c. A third set were placed in the same circumstances as the latter, and nourished in the same way, but they were given every second day some bread containing nine grains of carbonate of iron. The animals were killed after the lapse of five months. The first set were healthy; the second set had tubercles in the lungs or other parts of the body; while the third set remained completely free from any trace of tubercle. M. Coster assures us that he has performed similar experiments on dogs, chickens, &c., and invariably found that the bread containing iron prevented the formation of tubercles.—*Provincial Med. and Surg. Jour.* June 12, 1841, from *Bull. de l'Acad.* No. 13.

The use of Opium in Acute Internal Inflammations. By Robert Christison, M. D., Professor of Materia Medica in the University of Edinburgh.—1. The varieties of internal inflammation which best exemplify this action of opium, when given singly, are the inflammations of the mucous membranes. Of such diseases there are at least four which may often be thus successfully treated without almost any other remedy, namely, coryza, catarrh, influenza, and dysentery.

As to *Coryza*,—most persons on feeling its approach, are content to submit without a struggle to the infliction, and eschewing alike physic and the physician, let their "cold in the head" take its own way. But few would do so, were they aware how easily and how agreeably so tormenting a visitor may for the most part be got rid of. For twenty years I have been accustomed to see it stopped at once by a full opiate given on the first day of its appearance. Let the patient avoid food after dinner, use liquids sparingly, take a full dose of muriate of morphia, or Battley's solution, at bedtime, and breakfast before getting up in the morning,—and he will then commonly find the secretion of the nostrils permanently inspissated, and the complaint either gone entirely, or at any rate no longer a source of particular annoyance.

During the same period I have often seen a common *catarrh without fever* cut short in like manner, if taken on the first, second, or perhaps even the third day. Or more generally it seems to pass at once over the intervening stages to that in which thick sputa are coughed or hawked up without labor, and without irritation in the chest or windpipe. *Febrile catarrh* too may be checked abruptly in the same way, if patient and physician are lucky enough to meet during the first or the second day at farthest. But here probably the next mode of employing opium is fully more successful. I have also repeatedly seen epidemic *influenza* thus checked at the outset,—the local inflammation vanishing, while the strange lassitude, listlessness, and ennui, so characteristic of this disorder, went on as usual for some days during convalescence.

Although an authority so recent and so eminent as Mr. Pereira states, that "in *dysentery*, opium can only be used beneficially in the latter stages, and then with great caution" (*Mat. Med.* 1303), this is another and more formidable malady, which, if I mistake not, may be added to the mucous inflammations capable of being cut short in the early stage by opium. I doubt whether Mr. Pereira's doctrine will be received at all as a general proposition. There is not a better way of treating an ordinary mild dysentery at the commencement, than by the familiar practice of alternate opiates and laxatives. But—what is more connected with the matter now chiefly under review—in severe epidemic dysentery, as it occurs at times in this country, the cure when early begun, may be commonly trusted, if I may rely on my own experience, to opium alone,—not used, however, "with great caution," but given boldly and often.

2. The method of using opium along with ipecacuan as a

sedative anodyne, and sudorific, in the early stage of acute inflammations, is probably applicable to a considerable number of diseases of the kind. Those alone in which I have employed it are common sore throat, catarrh, and acute rheumatism.

From frequent observation, I am inclined to think that there are few cases of *acute cynanche tonsillaris*, which may not be cut short at the outset by this treatment, if they are subjected to it about the close of the first, or at all events before the close of the second day. Of several instances I have met with to this effect, the following are examples. A lady, rather subject to febrile cynanche tonsillaris, was attacked with rigors in the evening, and sore throat during the night. Next day the right tonsil was much enlarged and red, and the posterior palate and velum red and thickened,—the pulse at the same time being one hundred and twenty, and the febrile oppression considerable. In the evening, and therefore within the first twenty-four hours, ten grains of Dover's powder were given at intervals of half an hour, till half a drachm was taken. Perspiration which soon broke out gently, was kept up for fifteen hours by warm drink. In twenty hours after the powders were taken, the pulse was seventy, the pain in swallowing gone, and the swelling and redness insignificant; and on the subsequent morning she was able to leave her bed. This attack happened eight years ago at least, and the disease has not returned since. A lady about thirty-eight, long a martyr to cynanche tonsillaris,—which, in particular for three years before, had returned during the winter, ended in abscess of one or both tonsils, occasioned great and protracted torture, and had left chronic enlargement of these glands,—was attacked in the same way for the fourth time. When I first saw her on the fourth day of the disease, the tonsils, greatly enlarged, especially on the left side, blocked up nearly the whole throat. She spoke with much difficulty, could not swallow without long, painful, and repeated efforts, and breathed noisily and with labor. The pulse was one hundred and sixteen, full and soft. The febrile oppression and anxiety were great. A large blister had been applied to the throat, and purgatives taken freely, but without the slightest benefit. The attack seemed too far advanced to be arrested. But as fluctuation could not be detected in the larger tonsil, Dover's powder was ordered as in the former case. Sweating ensued; ere long, warm drink could be swallowed with no great difficulty: and when the perspiration had thus been kept up for twenty-four hours, the pulse had fallen to sixty-four, the swelling of

both tonsils had materially subsided, and the febrile anxiety had ceased, together with the local uneasiness in a great measure. In two days more there was little complaint left except weakness. In the course of time, the chronic enlargement of the tonsils disappeared; and this lady, like the last, has never had another attack, though five years have elapsed since the one now described. The tendency to cynanche tonsillaris, certainly seems to grow with its repetition in a severe form; and I have met with other instances besides these two, where an abrupt early cure seemed to break both the attack and the liability. The only objection, or rather obstacle, to this plan of cure is, that patients unluckily will seldom put themselves in the way of profiting by it; as the practitioner does not often see febrile sore throat, till the chief question he has to consider under the head of treatment is, whether an abscess in the tonsil is to be opened by nature or the lancet.

I have seen *febrile catarrh* quickly arrested in the same way in persons prone to it. But the circumstances have been so similar to those just described, that a detail of them here seems unnecessary.

Whether *acute rheumatism* may also be treated successfully by the like means, is a matter of doubt. At the period at which medical men generally first come in contact with a case of it, sweating by Dover's powder will not succeed singly. But this is a powerful and speedy measure, if immediately preceded by general blood-letting. Perhaps, then, the present topic would be better deferred, and taken up under the next head. But since it is the action of opium as a sudorific, which seems here the source of its curative influence, while in the third mode of using it for arresting acute inflammatory diseases of this kind of action is not at all essential, the treatment of rheumatism will be more conveniently disposed of in the present place.

There are physicians of undoubted authority, who maintain the acute rheumatism can scarcely be cut short,—that, do what one may, the patient must endure towards three weeks of agony, and three weeks more of stiffness, weakness, and occasional aches. I am convinced, however, that, at least in young adults of sound constitution, a genuine acute attack may often be put an end to in a few days, by first drawing blood very freely to the approach of faintness, and then giving Dover's powder instantly afterwards in the way mentioned above for inflammatory sore throat. I have often observed, that after sweating has been thus brought out and kept steadily up for thirty-six or forty-eight hours, the pulse fell to the natural

standard from nearly double that rate, the white thickly-furred tongue began to clean, the pains and redness gave place to numbness and want of power, recovery went on afterwards swiftly and without interruption, and the patient was able to leave his bed in a week. The chief conditions for success are, that the bowels, previously opened if necessary, shall be let alone till the sweating is well over; that blood be drawn both largely and to approaching syncope; that the powders be given immediately afterwards, before the circulation recovers its state of excitement, which it will otherwise soon do; that the treatment shall be enforced before the close of the fourth day, but earlier if possible; and that the case shall be real acute rheumatism, not one of the sub-acute form, or gouty rheumatism, as it is called. Where for some days previously the local inflammation has been shifting from joint to joint, with irregularly intermitting fever, I have once or twice tried to do without the preliminary blood-letting, but have not succeeded. In one instance, that of a stout young cabinet-maker, copious sweating begun on the third day without blood-letting, and maintained for eight-and-forty hours, was of no avail; but when repeated after one free evacuation of blood, it put an end to the disease abruptly in the way just described.

3. The treatment of acute internal inflammations by opium after blood-letting is now currently used by some practitioners. But since, notwithstanding its efficacy, it is still not generally practised, it seems to need the support of farther testimony than it has received from the few who have taken public notice of it.

This mode of cure consists in withdrawing blood very freely from the arm till faintness approaches, just as in the ordinary way of treating acute inflammations,—and then giving a large opiate, with a view to bring on sleep or the calm reverie which in some people takes the place of sleep. The result is, that, on the patient awaking, the general fever and local inflammation are found to be subdued and broken,—generally at once, but sometimes not till the repetition of the practice in twelve or twenty-four hours.

The conditions for successfully employing opium after blood-letting are nearly the same with those for using Dover's powder in rheumatism. It is essential that the disease to be subdued be in its early stage; that a deep impression be made on it by blood being withdrawn both freely, and to the approach of faintness; and that the opium be given largely and immediately so as to anticipate the renewal of reaction. Sweating sometimes ensues, but it is not at all a necessary condition for

success. The particular preparation of opium to be used, is perhaps of no great consequence. I prefer the solution of muriate of morphia, or, failing that, the sedative solution of Battley. The dose of the former should not be less than forty minims, for an adult male, and for others in proportion; and the dose of Battley's solution, which is certainly not so strong as its maker represents, should not be less than twenty-five or thirty minims. Some conceive this treatment applicable only to inflammation of membranous surfaces, not to that of parenchymatous textures. I do not know any positive facts either on one side or the other of this question; but the statement is doubtful, if it be meant to apply to acute parenchymatous inflammations in their early stage, If pneumonia be regarded as inflammation of a parenchymatous tissue, which, although a common mode of viewing it, is rather incorrect,—then, there can be no doubt that in this particular instance the treatment is most effectual on many occasions.—*Braithwaite's Retrospect Pract. Med. and Surg.* No. 3, from *Edin. Monthly Jour. of Med. Sci.* Feb. 1841.

Antidote to the Salts of Copper. By W. Benoist, Pharmaceutist at Sancoius (Chev).—Liquid albumen is at present almost exclusively adopted as an antidote for the salts of copper, since it possesses the property of decomposing and precipitating almost all the metals, and of forming albuminous compounds with the metallic oxide and the acid. But we are exposed to serious consequences in poisoning, if after having excited and facilitated emesis, we should administer to the patient a large amount of albumen, for the purpose of more certainly neutralizing the poison; what happens? The cupreous precipitate will be dissolved in the excess of albumen. If, on the contrary, too small a quantity of this latter is employed, it will remain dissolved in the excess of solution of copper. To obviate this inconvenience, we have no means, for we do not know what amount of albumen is necessary to neutralize a given quantity of any salt of copper and were this positively known, we could not properly estimate the quantity remaining in the stomach after emesis.

I am about to propose another agent which does not offer the same inconvenience; I mean a solution of carbonate of soda, which forms with the salts of copper precipitates of a green color, insoluble in water, carbonate of copper. It is on account of its insolubility in water, that this carbonate has

no action on the animal economy. I have experimented on animals; some I caused to take acetate of copper, others the sulphate, and to others I gave at the same time both the salt of copper and alkaline solution. In every case the results were satisfactory. I caused a dog of moderate size to take 35 grains of a saturated solution of carbonate of soda. This quantity, more than sufficient to neutralize the poison, did not produce any unpleasant effects. I judge that this salt may be exhibited with impunity, in large amounts, as in the above cited case it only produced some alvine evacuations. The large quantity of carbonic acid which it contains (in 100 parts, carbonic acid 45, soda 31, water 29), causes it to be less caustic than the other alkaline carbonates. I have not yet had occasion to employ this in any case of poisoning in the human subject. I may observe that we ought not to lose sight of the indispensable necessity of exciting vomiting, so as to expel as much as possible the excess of poison.

Before M. Orfila had elevated toxicological science to its present rank, we may call to mind what were the means used to counteract the effects of the preparations of which I have spoken: solutions of sugar; these means being effectual, how can we explain the result? It may be that the carbon of sugar coming in contact with the oxygen of the water and of the oxide of copper, passes to the state of carbonic acid, and then the same reaction is produced as by the means I have recommended.

We have a recent example of the effect of sugar in an observation of M. Lesage, relative to a young man, who, wishing to destroy himself, took the sulphate of copper in a highly sweetened drink, and by accident escaped, the poison being thus neutralized.

From the foregoing, we may conclude that if sugar by one of its elements, may give rise to the formation of carbonic acid, and form insoluble compounds with the salts of copper, we should not be astonished that the bicarbonate of soda should possess this property in a higher degree.

Milk has also been for a long time considered an antidote to the salts of copper; the acid, it is true, separates the curd which precipitates; but it does not really render much service under these circumstances, unless it acts as a soothing application.—*American Journal of Pharm.* from *the Jour de Chimie Med.*

New Process for the Detection of Copper, applicable to Medico-legal Analysis. By M. Verguin, of Lyons.—This process was suggested by an observation made some years since in analysing a mineral of copper. By accident, I placed the solution in a platinum capsule, and wishing to estimate the copper in a metallic state, placed therein a plate of iron. While the iron was not in contact with the platinum, no action took place; but the instant it came in contact with this latter, the capsule was covered with a very adherent film of copper, no precipitation taking place on the iron. The adhesion was so strong, that to separate them, nitric acid had to be used. I paid but little attention to this fact, and had almost forgotten it, when it was called to mind by reading the process of Dr. Christison for the detection of mercury; and I sought out a simple process which might be applied to the determination of copper in medico-legal analysis. It is this which is the subject of the present note.

Before entering on the description of my process, I will rapidly examine the different reagents employed—their degree of certainty, and the case in which they will be insufficient. These reagents are ammonia, the yellow cyanide of potassium and iron, and metallic iron.

Ammonia acts by dissolving the oxide of copper, and producing a fine blue color; this color is with difficulty perceived, if—1st, the liquid tested contains a salt of which the base is precipitated by the ammonia, for then it is disguised by the precipitate; 2d, if it is colored by organic matter. It is true we may filter and decolorise by animal charcoal—but when but little of the substance is possessed, it is very important not to lose any by the number of manipulations.

The cyanide of potassium and iron detects minute quantities of copper; for this it is necessary that the liquid should be pure, and especially that it should not contain a trace of iron, for without this it is impossible to distinguish the brown color of the salt of copper, when mixed with the blue of the salt of iron.

Iron acts by decomposing the salt of copper and precipitates the copper in a metallic state, an action well represented by the following formula: $(Cu3S) + Fe = Cu + (Fe3S)$, where we may see that the iron takes the place of the copper, and when the reaction terminates, we have sulphate of iron and metallic copper. But it is necessary that the liquid should be acidulated by a little acid; but if too much be ad-

ded and the copper be in small amount, the iron blackens, and prevents the copper being readily distinguished. Moreover the copper does not adhere, and the least disturbance causes it to separate.

These uncertainties do not exist in the process which I am about to describe, and which is no more than the application of the observation of which I spoke in the commencement.

It is proper that the liquid to be examined, if it be dilute, should be somewhat concentrated, and slightly acidulated with hydrochloric acid; a drop is to be placed on a plate of platinum, and covered with a well polished plate of iron, in such a manner that the iron shall touch both the liquid and platinum. In a few seconds the platinum exhibits a very adherent covering of copper throughout every part touched by the liquid. The explanation of this fact depends entirely upon electro-chemical theory; it results from principles which I shall rapidly enumerate: 1st, when two metals are placed in contact, there is a production of electricity, one of the metals being positively and the other negatively electrified. 2d, when a solution is subjected to the action of the pile, the salt is decomposed, the acid passing to the positive, and the base to the negative pole. There are some salts which are not only thus decomposed into acid and base, but still further the base itself is decomposed into metal and oxygen; in this case the metal only passes to the negative pole, the oxygen appearing at the positive pole.

But, when iron and platinum are placed in contact, there is a developement of electricity, which developement is the more active when a saline solution is present; the iron becomes positive, the platinum negative. The salts of copper have the property of being decomposed not only into acid and base, but into oxygen and metal. Hence the acid being more oxygenated is transferred to the iron or positive pole, while the metal is fixed on the platinum or negative pole.

Such is the process which I offer as most exact, and not liable to the uncertainties of the other methods. It is simple, does not require any manipulation which may not be performed by persons with but a slight chemical knowledge, and I believe will be found useful in medico-legal experiments.—*American Journal of Pharmacy* from *the Jour. de Pharm.*

Statistics of the Lateral Operation of Lithotomy at Naples. By M. S. DE RENZI.—From the year 1821 to 1828, inclusive, 596 cases of stone were operated on, 579 of whom were males, and only 17 females. Of this number 503

recovered, and 91 died; 306 of these cases occurred in persons under 15 years of age; 231 in adults, and 59 in aged individuals. As a means of comparing the mortality from this operation, the results of the operations of lithotomy for the year 1839 are given. During this year 47 were operated on, 46 of whom were men, and 1 woman. Of these 38 recovered, and 9 died. Of this number 15 were below 15 years of age: 31 were adults, and 1 was aged.—*Ed. Med. and Surg. Journ.*, from *Il Filiatre Sebezio Giornale.*

Reduction of a Strangulated Hernia, apparently effected by Acupuncture. By Dr. Daser.—A man, 50 years of age, was seized with strangulated hernia, with vomiting of stercoral matter and all the other usual symptoms. The taxis having failed, Dr. Daser, before having recourse to the operation for strangulated hernia, with the view of trying the effect of acupuncture, for the purpose of evacuting the gaseous contents of the strangulated portion of the intestine, made two punctures in it with a long fine needle. No gaseous matters apparently escaped, but the patient complained of acute pain, and loud gurgling sounds were heard in the abdomen, immediately after which the hernia was spontaneously reduced. Dr. Daser attributed this fortunate occurrence to the prick of the needle having excited contractibility of the intestine, causing it to contract on its contents, expel the gaseous matter into the abdominal portions of the gut, and thus facilitate its reduction.—*Ibid*, from *Journal fur Chirurgie und Augenhetlkunke*, 1840.

Hæmorrhage after Lithotomy stopped by Creosote. By Dr. Daser.—In a case of lithotomy it was found impossible to arrest the hæmorrhage by any of the usual means, and no particular vessel could be discovered from which the blood might flow. The patient was at last reduced to the lowest ebb from the continued loss, and had already lost consciousness, when a sponge dipped in pure creosote was introduced into the wound, and pressed against the bleeding parts for an instant or two. The hæmorrhage was immediately arrested. No particular pain was experienced, no unpleasant symptoms followed: thin eschars were thrown off, and the patient recovered.—*Ibid.*, from *Journ. fur Chir. und Aug.*, 1840.

The conditions which favour an excessive size of the Fœtus.—Professor Osiander regards a too exclusive use for food, of articles composed of fecula, especially rye-bread, as contributing to produce a sort of fœtal hypertrophy; and he recommends to pregnant women who are obliged to live on such a diet, to abstain at regular times from food, and to take occasionally a saline purgative. The excessive developement of the fœtus is one of the causes of difficult labor, and the Professor relates five cases of this nature.—*American Journal of the Med. Sciences*, from *Zeitschrift fur gesammte Med.*

Medical Quarrels.—On the old principle that "misery loves company," our readers may not be sorry to hear that all the medical squabbling is not confined to our city, nor even to our side of the Atlantic. Paris is at present the seat of a very pretty quarrel. It seems, M. Gerdy clinical Professor of the Faculty of Medicine, in a discourse lately pronounced by him at the opening of the session, has given mortal offence to some of the Parisians. Gerdy took for his theme, the life and character of Sanson, the lately deceased Professor of clinical surgery, and it cannot be denied that he did full and noble justice to his late colleague. The severe virtues of Sanson, his high and inflexible principle, his generous disinterestedness, his perfect honesty, are all well appreciated. This however need not have given offence and perhaps did not; but M. Gerdy went further, he exposed the ingratitude of Dupuytren, and his cold-hearted selfishness towards his pupil and his very devoted friend. Dupuytren it seems used Sanson in every way without scruple, availed himself of his literary talents, and yet never would forward his views, but rather used his influence to keep down Sanson, to keep him in the background. All this is brought out without ceremony by M. Gerdy—he also lets us into a piece of literary history, which is curious and amusing, viz: that Sanson *wrote part if not all of Dupuytren's Thesis* for the Concours at which he gained the Chair of Surgery. Dupuytren was, it appears, a slow and difficult writer, eternally revising, correcting and altering his manuscript—never satisfied—hence it happened that as the time for presenting the thesis approached, Dupuytren could not finish his, and actually wrote a letter to the Faculty, announcing his withdrawing from the Concours. Duprey, one of his friends, saw the letter and withdrew it. He afterwards persuaded Dupuytren to go forward, and then Sanson came

forward in the fullness of his devotion to his master, finished the thesis, and thus opened to Dupuytren the career in which he gained so much fame and so plentiful a fortune. It is to this man who so signally *saved him* in his hour of need, that Dupuytren is said by M. Gerdy to have been ungrateful.

This accusation against their surgical idol, has united the Parisian Journals in a most furious tirade against Gerdy. He is denounced without stint or measure, and even without decency—meanwhile the facts will all probably come out, and we fear that it will be manifest that the great Parisian Surgeon was as deficient in moral qualities, as he undoubtedly was eminent for intellectual powers. Meanwhile, whatever may happen to the master, the pupil is sure to occupy a most enviable position. All parties unite in doing honor to Sanson, and he, who lived in poverty and suffering—who starved while Dupuytren was rioting in wealth, is now honored, beloved, venerated—and that, not because he was learned, or wise, or bold, or daring, but because he was good, because he was honest, because during his surgical llfe, he was ever under the influence of high moral principle, because no temptation ever induced him to swerve from the strait and narrow, and as he found it, the thorny path of strict professional honor and honesty.

Such was Sanson; he is dead—but *his* memory lives in green and beautiful freshness. Dupuytren too is dead—*his* memory lives, but alas! his friends are already reduced to the sad necessity of attempting to drown by clamor the voice of Gerdy, who has dared to tell that truth which none of them dare deny. There is a lesson in all this which ought not to be lost upon us—few can hope to rival the splendid achievements of Dupuytren, but all may practice the virtues of Sanson.—*N. Y. Med. Gaz.*

Researches into the real constitution of the Atmosphere. By MM. Dumas and Boussaingault.—It is generally admitted that the air is composed of a mixture of oxygen and nitrogen, and its invariableness is explained by supposing that the green parts of plants under the influence of solar light decompose all the carbonic acid developed in the respiration of animals, and the putrefaction of organized bodies. Some, however, regard the air as being not a mixture, but a chemical compound of 20 of oxygen and 80 of nitrogen (Prout, Doberein-er, Thomson, &c). Others, and these the majority, consider

it as a mixture of 21 of oxygen and 79 of nitrogen; and, lastly, in the opinion of some (Dalton, Babinet), the composition of the air varies according to the height in the atmosphere.

The plan employed by the authors in submitting these questions to a fresh examination is distinguished from others in that they estimate the weight instead of the measure of the gases, and thus analyze the air by weighing successively the oxygen and the nitrogen which it contains. We cannot follow them into all the details of their experiments, which, by successive corrections, were rendered more and more exact: we can only point out the results.

They fix the density of oxygen at 1.1057, and that of nitrogen at 0.972; numbers a little different from those given by other chemists. They demonstrate that the relation of the volume of the oxygen to that of the nitrogen in the air is not expressed by simple numbers; and that the air cannot be regarded as a chemical compound of 20 volumes of oxygen and 80 of nitrogen. They admit, as *a sufficient approximation*, that the atmosphere is composed, by volume, of 20.8 of oxygen, and 79.2 of nitrogen. They presume that the mixture is uniform in all times, in every latitude, and at every height. "If the atmospheric air," they add, "is a reservoir of oxygen for the use of animals, and a reservoir of carbonic acid for the use of plants, it is so considerable a store that the consumption, supposing it not to be compensated, would remain almost insensible after a long series of years." They have calculated that supposing each man to consume a kilogramme of oxygen per day, and that the oxygen disengaged by plants did no more than compensate for the other causes of its absorption, the whole human race, and three times their number, would not consume, in a century, the eight-thousandth part of the oxygen which nature has placed in the respirable air.—*Lond. Med. Gaz.*, Oct. 15, 1841, from *L'Examinateur Medical*, Aout 20, 1841.

On the Influence of the last Inundation on the health of the Population of Lyons.—It was a matter of much interest to determine what were the effects on the health of its inhabitants of the inundation, which, in so short a time, on two different occasions, covered a part of the town of Lyons. If mere variations of temperature and atmospheric moisture do exercise on the health only a part of the fatal effects attributed to

them, it is certainly, in a case like that of Lyons, that such effects ought to be easily appreciable. In no inundation of that town had the waters ever before risen to such a height: in none was their stay so long, or their retreat so slow. They covered the town and the country round over an area of several leagues; they inundated the quays, the streets, the places of public resort, the cellars, the houses; and they polluted the waters of the wells, the pumps, and springs, with heterogeneous substances that filtered into them from the sewers and the privies. After their retreat a stinking sediment covered the majority of the streets, and a thick viscid mould lined the inner walls of the houses; the atmosphere was charged with a nauseous dampness; the population was distressed; everything was dreary; and yet the inundation of 1840 had but a just perceptible influence upon the public health. From the month of November in that year, to the present time (July, 1841), the hospitals have not been more than usually encumbered: the number of patients has been but little increased, and, though the mortality has been distinctly greater, yet this cannot be attributed to any disease in particular produced by the inundation.

In the days immediately following this scourge, a considerable number of cases of obstinate diarrhœa, and some of dysentery attributed to drinking the unwholesome water, were observed. Some typhoid fevers also appeared; and, if the state of the atmosphere had any influence upon them, it was only by prolonging their continuance, and giving them a more marked adynamic character. Still they were not more fatal than they usually are, though it was necessary to modify the ordinary treatment; blood-lettings at the outset were less employed, and tonics were sooner and longer administered.

At a later period numerous and obstinate rheumatisms were observed, but they rarely had an acute character, except in those who had worked long in the water: in general the moisture of the atmosphere rather revived old pains than generated new ones. The diseases which reigned most generally, were catarrhs and catarrhal fevers, which, however, are habitually prevalent at Lyons at this season; but the inundation remarkably increased their number and modified their character; some affecting the lungs, had an alarming intensity and obstinacy, but on the whole they destroyed but few. An epidemic disease, of which both the etymology and etiology are still obscure, reigned at this time at the garrison, but it could not be, in any measure, traced to the effects of the inundation.

Notwithstanding the absence of any special affection, however, the mortality was more considerable than during the preceding years. Thus, in the last two months of 1840, the town and hospitals together had 1118 deaths; while in the same two months of 1839, there were but 787, and of 1838 only 750. But this difference is easily explained by the pernicious influence such a scourge would have on aged, weak, and diseased people, and especially on such as were already affected with chronic diseases.

The author attributes the good state of health of the town and its environs, during the continuance of the scourge, to the prompt and energetic measures which were taken by the local administration, and to the north wind, which continued for twenty days and greatly aided the sanitary measures that were employed.—*Lond. Med. Gaz. November* 5, 1841, from *Journal de Medecine de Lyons*, Juillet, 1841.

Treatment of Asphyxia from drowning.—As most practitioners in the city or country are occasionally called upon to attempt the resuscitation of persons apparently drowned, yet not so frequently as to bear in mind at all times the differences of opinion among the more experienced, as to the artificial respiration, and the time at which it becomes useless, we extract the following remarks from a debate on the subject before the Westminster Medical Society, in October last, as published in the London Lancet for October 30th.

Mr. Forbes Winslow led off this portion of the debate, which was collateral with a discussion on the various forms of asphyxia in new-born infants, eliciting nothing new, as far as we can judge from the report.

"Mr. Winslow was of opinion that inflation by air breathed from the mouth of the practitioner was the best plan of carrying on artificial respiration. Experiments had shown that the air so used was but little altered in quality, and contained only one-hundredth part less of oxygen than it did previous to its being respired. With respect to the recovery from asphyxia by drowning, Dr. A. T. Thomson had related a case in which a person who had been twenty minutes under water was restored; while other cases were recorded, in which three minutes' immersion was sufficient to entirely destroy life, and frustrate all efforts for its revival. How did we account for this discrepancy? The most experienced pearl-divers could not remain under water more than five minutes. He

(Mr. Winslow) thought that when persons fainted immediately on submersion, vitality was longer retained in consequence of there being less demand upon the system than when struggles were made by the sufferer.

"Dr. Chowne would look with suspicion on any case of recovery from asphyxia by drowning, in which it was stated that the person had been under water for more than six or seven minutes. He believed, indeed, that there was no well-authenticated case of recovery in which the submersion had exceeded six minutes."

"Mr. Wooley thought Mr Read's instrument would be of great service in asphyxia, whether occurring in adults or infants. He had been in the habit of using the means recommended by the Humane Society to keep up artificial respiration, for some years. The instruments used were the bellows and the trachea-tube. The use of the bellows might be productive of much injury; and it was not always an easy matter, even to those who knew the anatomy of the parts well, to insert the trachea-tube into the proper orifice. Mr. Read's instrument did away with these objections, and he considered it an admirable means of keeping up artificial respiration." "In asphyxia from drowning, however, he had seldom found much benefit from attempts to keep up artificial respiration. When a body was brought to the receiving-house, it was immediately placed in a bath at 100°. Respiration most frequently occurred spontaneously whilst the person was in the bath, and in some cases it took place before the patient had arrived at the station. If, after the body had been placed in the bath, there was no appearance of vitality, he had generally found the employment of artificial respiration of no benefit. Respiration, when first returning, was generally interrupted and spasmodic; it then became regular, and frequently no ill consequences followed. There was, however, in many cases, much mischief supervening in the form of congestion of the brain and thoracic viscera. In some cases of this kind, the convulsions were so great, that the patient was held with difficulty whilst blood was abstracted. In these cases the only instrument he had found of service was the lancet; and it was often necessary to take away a considerable quantity of blood."

Mr. Wooley then read a case illustrating the length of time during which life may be preserved. It was first published in the report of the Royal Humane Society in 1840, but as the report is in few hands in America, we extract from it every thing essential.

"At about half-past ten in the morning, a police-constable on duty, and the gate-keeper, saw a man, a little more than half way over the bridge, place his hat upon the pavement, mount the parapet, and leap into the water. The policeman ran to the spot where the occurrence had taken place, and the gate-keeper to his lodge, in which was one of the society's speaking-trumpets, to use it in calling for a boat; but before doing so, he took out his watch, and carefully observed the time. When he saw the boat coming, he ran and joined the policeman and others who were observing the man in the water. From the time of his jumping in he had remained under the surface, supported in a perpendicular position by the flaps of his coat, which lay *upon* the surface, a small portion of the scalp being out of the water. His face was never above the surface, and a great number of small air-bubbles kept coming up from the commencement. He moved very little—at length a large bubble came up, and he immediately began to sink deeper; the bystanders now exclaimed that it was all over with him. At this moment the boat reached the spot, when he had sunk so low that his coat tails were but just within the reach of the arm of the man employed by the institution, who, however, got hold of them, and pulled him into the boat. The gate-keeper then looked at his watch, and found that exactly *five minutes* had elapsed since he first noted the time. The man was apparently dead; but just after he was laid down in the boat a low moan was heard, another midway between the bridge and the receiving-house, and a third when he was on the stretcher being carried into the house. There was, however, no *appearance* of breathing or of life when he was put into the warm bath, which was ready upon his arrival; but, almost immediately after, convulsive and irregular breathing commenced—he breathed irregularly and moaned occasionally for about fifteen minutes. In five minutes more I saw him; his breathing was then quite natural, his pulse regular and good; he had no pain in the head or chest, nor any where else, and felt pretty well; his face, however, was very pallid, and his eyes suffused: he looked like a man who had suffered from habitual intemperance, which I found was the case. I now had him taken from the bath, and put upon the warm bed, apparently free from cerebral or *thoracic* congestion, and only wanting strength to enable him to go home. As the ward was too hot and close, I desired that a little air might be let in, and left the room for a short time. On my return, I found that my order had been misunderstood, and all the windows had been opened. I was absent only a very few

minutes in the adjoining room. The effect of this admission of cold air was to produce oppressed breathing and much cough, and to require treatment and watching, which detained me six hours at the receiving-house; they would not take him into St. George's Hospital, and, till the expiration of that time, I did not think it safe to send him home. This shows the importance of warm air in resuscitation."—*Philad. Examiner.*

Connection between abundance of food and mortality. By M. Melier.—In this memoir, which was read at the Academy of Medicine of Paris on the 7th of September, the author established, by numerous documents drawn from the histories of various countries, that the number of deaths always correspond to the price of food. "Wherever there's a loaf added there's a man born," said an economist; and nothing is more true than this metaphorical expression. If we represent the variations of the general mortality and those of the price of bread at different times, by two curved lines which rise and fall with all the fluctuations of these particulars, we shall find all their curvatures exactly, and with the most perfect regularity, corresponding. The constant increase of the population of France for a certain number of years, is easily explained by the progress of agriculture, the modifications which the laws relating to corn have undergone, and especially by the introduction of potatoes. The influence of the dearness of food, however, is observed more distinctly in the year next following than in any in which it has occurred.—*London Med. Gaz.*, from *Gaz. Med.*, September 10, 1841.

Copy Right in Lectures.—The question as to what right a lecturer has in his oral lectures—and whether he can prevent their being published by any one who may attend them and take notes for the purpose, has recently been brought before the courts of our city. Dr. Mott applied to the court of chancery for an injunction restraining Dr. James A. Houston from publishing his, Dr. Mott's Lectures, in the Lancet. This injunction was sought on two grounds, first, that Dr. Mott had hired Dr. H. to take notes of the lectures, and paid him a valuable consideration therefor, and that part of the bargain was, that no public use should be made of the notes. The second ground was the general principle, that a public lectu-

rer has a right in his lectures, and that it is a violation of that right for any person to publish the lecture, or notes of it; that notes can only be taken for the individual benefit of the student, and not to be published for gain. These were the grounds on which Dr. Mott sought to prevent the publication of his lectures in the Lancet. In support of the application, David Graham, Esq., appeared before the assistant Vice-Chancellor, Murray Hoffman, Esq., and Dr. Houston was defended by Mr. Sherwood. The case was fully argued on both sides, and on Wednesday last the opinion of the court was given. The Assistant Vice-Chancellor held, that the State Courts had no jurisdiction in the matter, it belonging exclusively to the U. S. Courts; upon that ground the injunction was, substantially, dissolved. The learned judge however expressed *a very decided opinion, that Dr. Mott could restrain the Editor of the Lancet from publishing his lectures*, on the ground of the bargain alleged by Dr. M. to have been made, whereby Dr. H. expressly stipulated that he would make no such use of the notes, which Dr. M. employed him to take. As to the general question, whether a public lecturer can restrain a student or other person from publishing notes he may take of the lecture, the Court had great doubts. The decision of Lord Eldon in the case of Mr. Abernethy, versus the Lancet,* could not be considered as settling the law upon this matter, although it is quoted with approbation by Judge Story and Chancellor Kent.†—*N. Y. Med. Gaz.*

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* It seems to be a very general opinion among medical men, that in this case the English Court of Chancery decided against the right of a lecturer to prevent the republication of his lectures; this is a mistake, the decision was exactly the reverse. Lord Eldon gave a long and very able opinion in favor of Mr. Abernethy, in which he sustained fully the ground taken by the plaintiff, viz.; "that a lecturer had a right in his lectures, which none of his hearers could invade, by publishing notes of his lectures." At a subsequent stage of the proceedings the contest was abandoned by Mr. Abernethy, and consequently the injunction was dissolved by default, no one appearing to support it. As the law now stands in England, the right in question is possessed by every public lecturer; the expediency of exercising this right is of course another and a very different question.

† We understand that Dr. M. has appealed from this decision, and proposes to pursue the matter in the higher courts.

THE WESTERN JOURNAL.

Vol. V.—No. III.

LOUISVILLE, MARCH 1, 1842.

THE TREMBLES AND MILK SICKNESS.

Some ten or twelve months since we published in the Journal a memoir on these maladies, as they have prevailed *between the Little Miami and Sciota rivers, in the State of Ohio.* In this memoir we included nothing previously published by any person concerning those diseases in that quarter, much less any where else, nor did we introduce any of our own unpublished remarks made in other parts of the West. It was in fact a monograph of those diseases, as they occur in *that* particular district; and all the conclusions at which we arrived were from the facts collected while exploring it. In no case whatever, did we inquire whether these conclusions were either confirmed or invalidated, by facts observed beyond the narrow limits prescribed in our paper. Of the conclusions to which we refer, the most important were, that certain localities within the district generated the Trembles, while others are exempt; that in the former there are numerous scions from the roots of the climbing *Rhus radicans* of Linnæus, and are known by the people under the name of poison oak: that the destruction of the natural vegetation of these spots puts a

stop to the further progress of the disease; and that the facts collected show that this species of *rhus may* be, but do not prove that it *is*, the cause of Trembles.

Now, it is really amusing to see what a stir these and some other incontrovertible *facts*, in the same memoir, have raised among the milk-sick-literati of the West, each one of whom is nursing a special hypothesis, for which he is not only willing but desirous of fighting.

Some of them have merely heard of our memoir—others have seen, and misunderstood its plainest statements—others have wilfully misquoted and misstated its facts! Not one has visited the district, and ascertained that the memoir embraces a single false observation! Some have discovered that we are visionary and speculative, although we consulted more than a hundred persons, before admitting the fact, that calves experience the Trembles from the milk of their dams, and that dogs die from eating the flesh of animals dead from Trembles. We would like to know which of our sick-stomach-literateurs, has devoted a fortnight of diligent personal inquiry to the ascertainment of those facts? Our inquiries about the *rhus radicans* were conducted with equal patience and caution; and at the close we asked whether all the facts collected "*prove*" it to be the cause of Trembles; to which the answer given in the next line is, "*certainly not.*" Notwithstanding all this, we are charged with having declared this plant the cause! and then abused for loose observation, wild theorising, ignorance and falsehood! The worthies who agree in all this, disagree, however, in every thing else, for while each is showing off his own nursling, he is running down that of his rival. We congratulate the gentlemen on having such a fountain of excitement, now when the temperance reform has nearly closed up the alcoholic; and are not quite so misanthropic as to prevent them from misrepresenting and abusing us, whenever they can find enjoyment in it. All we ask, is the privilege of telling the public, now and then, that not being able to controvert what we have written, they have undertaken to controvert that which we have not written. D.

ARSENIC AND THE TREMBLES.

We understand from authority on which we can rely, that Dr. Seaton, a new champion of the old hypothesis that arsenic is the cause of Trembles, has actually succeeded in killing a cow with that poison!

We trust that no one will hereafter doubt its being the cause of that disease. To the incredulous we present the following syllogism, which may help them out: Cattle die of Trembles—a cow died from taking arsenic, *ergo*, the Trembles are produced by arsenic: *quod erat demonstrandum*. D.

KENTUCKY SCHOOL FOR THE INSTRUCTION OF THE BLIND.

Last winter, when delivering some popular lectures on Physiology, in the Hall of the Medical Institute, we took occasion to explain the different modes of teaching the blind; and urged the necessity for a school in this State. Mr. Bullock, a representative from this city, soon after introduced into the Legislature, a bill for that purpose, which passed one branch, but was laid over in the other. This winter, Mr. Bullock again brought up the subject, and at the request of Mr. Patton of this city, Dr. Howe of Boston came out with one of his pupils, and Mr. Chapin, the Superintendent of the Ohio School, came from Columbus, with three of the pupils of that institution. At Frankfort they made two exhibitions, with the effect of securing the passage of the bill, with an appropriation conditioned on the contribution of a sum of money by the people of Louisville. In this city, they made several exhibitions, and gave an impulse to the work of contribution. Thus, there is much probability, that within the present year, this interesting institution will be opened. We hope, however, that our medical friends will not relax in their efforts to prevent blindness, in consequence of reading this paragraph; and that none of them will advise parents to procure glass eyes for their children, instead of sending them here when the school shall be opened.

D.

OHIO LUNATIC ASYLUM.

In the elaborate and well digested article of Dr. Jarvis, (No. 24 of this Journal) ample justice is done to the *Ohio Lunatic Asylum*, by an abstract from its annual reports for 1839 and '40. Since the publication of that review in December, we have received the Report for 1841, which presents evidence of continued success in its management; but, unfortunately, its benefits can not be extended to all the insane of the State; for, extensive as the edifice is, it appears that from

the opening of the institution, Nov. 1838, to the date of this Report, three years, no less than 167 applications, formal and informal, from that State, had been refused, to say nothing of 1 from Wiskonsan, 1 from Alabama, 2 from Iowa, 2 from New York, 2 from Virginia, 4 from Kentucky, 7 from Illinois, 9 from Pennsylvania, and 13 from Indiana, equal to 41; indicating a want of such establishments in the States surrounding Ohio. Such of our brethren, in those States, as may wish to place their patients in the Ohio Asylum, will perceive, then, that it will be in vain to apply. It will be for them to exert their influence at home for the establishment of new asylums. If Indiana would found one, it might, for several years, answer for herself and her younger sister Illinois. We commend it to our readers in that State, as eminently worthy of their utmost efforts.

D.

KENTUCKY LUNATIC ASYLUM.

In the Review to which we have referred in the preceding article, Dr. Jarvis showed, from the reports sent out by most of the establishments of Europe and America, that the Kentucky Asylum has effected the smallest proportional number of cures, of the whole. This fact, together with his judicious remarks on its causes, and his suggestions for their removal, led the General Assembly to institute a full and searching inquiry into its condition, the results of which are now before us, in the Report of a Committee of its members. Most judiciously the committee recommended an appropriation for the purchase of a farm contiguous to the Asylum, on the necessity for which, and for some other improvementt, they speak in the following language.

"It is believed, that with the addition of the one hundred and seven acres, besides the incalculable advantage to the lunatics themselves, under judicious and proper management, the institution, by their labor, might be abundantly supplied with vegetables, and all the other productions of the soil.

When it is recollected that we are an agricultural people, and that a very large proportion of those who are found in the Hospital are accustomed to agricultural pursuits, and that, therefore, the cultivation of the soil will be not only useful, but agreeable to them, the calculation cannot be deemed extravagant. The Committee is fully sustained in this assumption, by the experience of the Worcester Asylum, in Massachusetts, where the lunatics have not only raised abundantly for the establishment, but have produced a surplus for sale. It is not unusual,

under the judicious and enlightened administration of that institution, "to see two men ploughing in the field, quiet and attentive to their work, and performing it well; both insane, both having committed homicide, and had therefore been confined many years in prison." The pleasing spectacle is exhibited of cheerfulness and contentment. "Those who before, were a pain to themselves, and a torment to their friends, and dangerous to the public, are now mostly quiet, comfortable, and even happy and useful. The sting of their mental death is taken away."

The Committee does not rest the claims of the Asylum to this additional appropriation, on these grounds alone. They are of opinion that it is the *duty* of the Legislature to afford all the means in its power to carry out the great objects of the institution, viz: the *restoration of the insane*, and the amelioration of their unhappy lot. To imprison them, to impose upon them the unnecessary restraints of confinement, to deny to them the common use of their own limbs, to shut them out from the light of heaven, and the enjoyment of the bounties of Providence, is at war with the spirit of the age, and in opposition to the lights of experience and the discoveries of science. They should be afforded the means of every enjoyment, not inconsistent with their wretched condition.

One of the advantages which the Committee proposes to accomplish by this purchase, is, that a residence will be secured, in all respects convenient and suitable, for a Resident Physician. They do not recommend the immediate employment of such an one, but they do not hesitate to express the opinion, that if the necessary arrangements could be made, that the true interests of the institution require it. That every successful Asylum for the insane, of which the Committee has any knowledge, is afforded the services of an enlightened Physician, whose time is exclusively devoted to the investigation and treatment of mental disease, is a fact entitled to the most respectful consideration.

It is not only necessary that the Physician should understand the physical maladies with which the patient is afflicted, but he should be acquainted with his character and the causes of his mental derangement, and by a close and accurate observation, determine upon the best means for his relief. He should be enabled by his manners and character to acquire a mastery over the intellect of his patient, and to conduct it in the proper channel. It should be his province to direct the whole machinery of the institution, with this object kept steadily in view. In a word, all the means employed, not excepting the government and discipline of the establisment, should be under his immediate control. Hence the necessity of a Resident Physician, and providing a suitable and convenient place for his accommodation."

We concur in every word of this extract, and when the Report reached us, fondly hoped, that the Legislature would not adjourn without carrying out the recommendations of the Committee. That hope

has, however, been disappointed; and we now call on the physicians of the State to step forth, and seek so to enlighten and animate the members of the next General Assembly, as to bring about the important ameliorations, demanded equally by the interests of humanity, and the dignity of the State. D.

OHIO SCHOOL FOR THE BLIND.

We have just received the Fifth Annual Report of this institution, and are happy to announce its increasing prosperity. Opening as late as the 4th of July, 1835, it has, already, 50 pupils, of which nearly all are the children of poor parents. But this number embraces a fraction only of those who from that State alone, to say nothing of the other States of the West, ought to be at this moment enjoying the advantages of such an institution. The neglect of parents, especially those of the country, in regard to the early treatment of the inflammations of their children's eyes, is truly lamentable; and the inefficiency of our plans of treatment, is too often quite as apparent. Hence the majority of the blind in the West, become so from diseases, which met in the outset with appropriate remedies, might be subdued. The number of this unfortunate class is annually increasing in all the Western States, none of which, except Ohio, has yet established a school. It is proper, then, that physicians should know, that many additional pupils can be received into the establishment at Columbus, and that the children of other States are not excluded. All the elementary branches of a common education are taught in the school; and also a number of mechanical arts. The expense of a pupil is $100 *per annum*, exclusive of clothing and some contingencies. The Report of Mr. Chapin, the excellent Superintendent, from which we have collected these facts, is drawn up with perspicuity; and has appended to it a number of interesting letters and other compositions, written by the scholars of the institution, which evince a progress as rapid as that made by children who have not lost their sight.

D.

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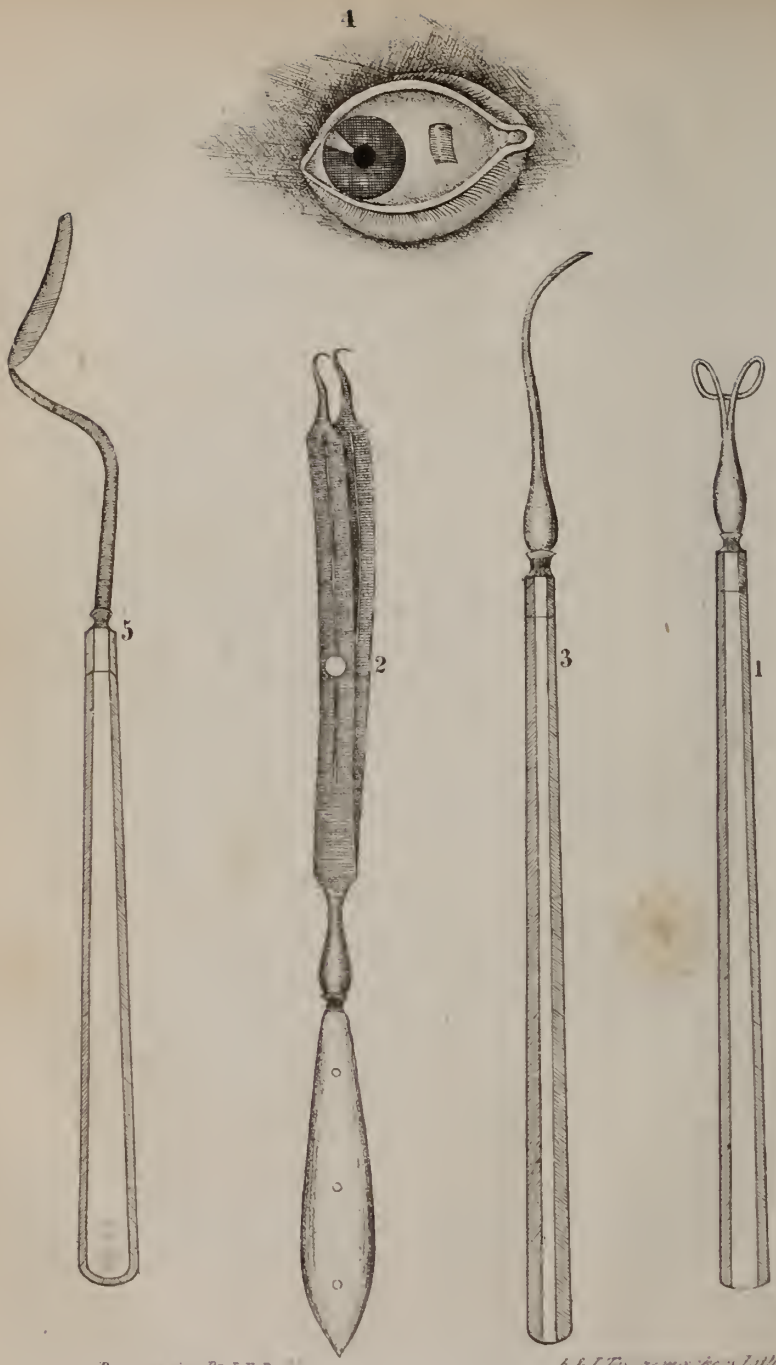

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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

APRIL, 1842.

ART. I.—*A Clinical Lecture on the Nature, Causes, and Treatment of Strabismus; delivered at the Louisville Marine Hospital, February*, 1842. By S. D. GROSS, M. D., Professor of Surgery in the Louisville Medical Institute.

Having recently performed the operation for strabismus several times in your presence, and many of you having expressed a desire to be made more fully acquainted with it, it is my design this afternoon to take up the subject in detail, and to lay before you such facts as an attentive study of this affection, during the last eighteen months, has enabled me to acquire.

Nothing, Gentlemen, so clearly evinces the happy progress of surgery as the remarkable improvements that have been effected, within the last six years, in the treatment of club-

foot and other analogous distortions. Until recently the nature and causes of these affections were, in great measure, if not wholly, misunderstood, and hence, as might have been expected, they were generally grossly mismanaged, the practitioner having no sound principles to guide or direct him. To Dr. Stromeyer, of Hanover, is justly due the merit of devising a mode of treatment at once easy and efficient, and which deserves allusion on this occasion, as it speedily led to the discovery of the operation which has lately been performed, with so much success, in various parts of the civilized world, for the relief of strabismus. When we reflect upon these curative procedures, their perfect simplicity, their entire freedom from danger, and their happy effects, it is only surprising that they should not have been revealed at an earlier period. Club-foot, wry-neck and strabismus must have been coeval almost with the human race, for it can hardly be supposed that mankind were ever wholly exempt from these and other infirmities incident to our nature. However this may be, their occurrence is exceedingly frequent at the present day, and the interest attached to them by the medical profession and society at large is fully commensurate with their importance. By the abnormal condition of a few muscles, often of very small size, or, indeed, of a single muscle, the most disagreeable distortion is produced; which, thanks to the researches of Stromeyer and others, may now be rectified in a very short time, or, as in the case of the eye, almost instantaneously.

The operation for the cure of strabismus was first performed on the human subject by Professor Dieffenbach of Berlin, in October, 1839. Prior to that period, however, its practicability had been tested by Mr. Anthony White of London, in several experiments on the inferior animals; and Dr. Stromeyer had also declared his conviction, as to its feasibility, from the fortunate results attending his cases of club-foot. The accounts of this novel operation were everywhere received with enthusiasm by the profession, and soon led to so many repetitions of it, that it may now be ranked as among the es

tablished resources of surgery. By whom it was first executed on this side of the Atlantic, I do not recollect, nor is it necessary that I should; in the West it was first performed, I believe, by Dr. Goulding of Arkansas, and a few weeks subsequently by myself. Altogether, I have now operated between thirty and forty times.

Before I proceed to speak of the nature and causes of strabismus, and the operation calculated to relieve it, I deem it my duty to call your attention briefly to the consideration of the muscles and fasciæ of the eye, as a thorough knowledge of these structures is a matter of no little moment in reference to the subject before us.

Those of you who are familiar with the anatomy of the eye, are aware that it is under the control of six distinct muscles, by which its various movements are performed and regulated. Of these, four are straight, and two oblique, their names being derived from their position in the orbit. The former take their origin immediately around the margin of the optic foramen of the sphenoid bone, whence they proceed forward to the anterior portion of the scelrotic coat, one of them being situated at the upper part of the ball of the eye, another at the lower part, a third internally, and the fourth externally. In this course they lie in close contact with the surface of the organ, being connected to it by cellular substance; and, as they approach the anterior portion of it, they all terminate in small, flat, delicate tendons, which are inserted into the membrane just mentioned, at unequal distances from each other, as well as from the cornea. That this is true, my own researches, confirmed by those of my friend Dr. Buchanan, of Tennessee, and of Mr. Baker, an intelligent and enterprising member of the class, abundantly testify. This statement is at variance, I am aware, with that of the most distinguished anatomists both of this country and of Europe, a circumstance which only proves how imperfectly they have observed and studied this portion of the human system. Professor Horner, for instance, the most able writer on descriptive anatomy in the United States, fixes the distance

at which the straight muscles are attached from the cornea at two lines for the superior and inferior, and at two or three for the internal and external; Mr. Quain, of London, indiscriminately at two lines and a half; Boyer, at two lines; while the more recent French authors, as Cloquet, Cruveilhier and Blandin, have evidently no settled notions in regard to the matter.

From the researches above alluded to, it was ascertained, beyond all doubt, that the internal straight muscle is not only more voluminous than the others, but that it is inserted somewhat nearer the cornea, the central portion of the tendon being rarely more than two lines distant from it, the superior margin more than two and a half, and the inferior more than three. This must give the muscle necessarily a great mechanical advantage, and is one reason probably, if not a principal one, why convergent strabismus is so much more frequent than the other varieties of the obliquity. The distance of the external straight muscle from the cornea may be stated at two lines and a half for the centre, three lines for the superior margin, and three and a half for the inferior; of the superior rectus, at three lines for the centre, three for the inner border, and four for the outer; and of the inferior, three for the centre, three and a half for the inner margin, and four and a half for the outer. To these admeasurements there are of course exceptions, and they are to be received, therefore, only in a general manner; for I have ascertained, to my perfect satisfaction, that the relative distances at which the straight muscles are inserted from the cornea, are liable to vary, not only in different individuals, but even in the eyes of the same person.

It has been already stated that the straight muscles are inserted at unequal distances from each other. This is true, so far as my own observations enable me to judge, in all cases, though there may be occasional exceptions. To exhibit this point in its true light, I will read you the following table drawn up from actual admeasurement:

Distance between the superior and internal muscles - 3 lines.
" " " " and external " - - 4 "
" " " external and inferior " - - 3½ "
" " " inferior and internal " - - 3 "

Such details may appear to you trivial and insignificant, and so, indeed, they are when considered merely in the abstract; but when viewed in reference to morbid action, or the effects of our surgical proceedings, they acquire a degree of interest and importance which those alone, who are familiar with the subject, can fully appreciate.

Are the straight muscles all of the same length, breadth and thickness, in other words, do they all possess the same degree of strength and development? It need hardly be said that they do not, though formerly the reverse of this was supposed to be true. The outer fasciculus is undoubtedly the longest; the inner the shortest and stoutest; the upper and lower being the smallest and nearly of equal length. Occasionally the disparity in the volume of these muscles is much greater than would, at first sight, appear possible. In one instance in which I made accurate admeasurements, I found the width of the internal bundle, one-third of an inch from its point of insertion, four lines, of the external three lines and a half, of the superior three lines and one-fourth, and of the inferior two lines and three-quarters. Generally speaking however, the difference is not so great, and it sometimes happens that the upper and outer muscles are the smallest.

Of the attachments of the oblique muscles it is not my wish to speak, as they are sufficiently well understood, and I have no new views to offer respecting them. I proceed, therefore, to make some remarks on what are denominated the fasciæ of the eye.

Until lately anatomists seem to have entirely overlooked these structures, since no notice of them is to be found in any of our treatises. Eight years ago, while engaged in teaching practical anatomy in the Medical College of Ohio, I satisfactorily demonstrated what I have since called the *ocular fascia*,

and in my Elements of Pathological Anatomy, published in the autumn of 1839, is to be seen a succinct yet clear account of it, the first, I believe, ever presented to the profession. Six or eight months thereafter it was described by Dr. W. A. McDowell of this city, and it has likewise been fully noticed by Mr. Lucas, in his recent treatise on Strabismus, under the name of the *subconjunctival fascia.* To enable you to form a correct opinion of this matter, I beg leave to read the following extract from the work alluded to: "The connection between the conjunctiva and the sclerotica is established through the medium of a pretty thick layer of cellular tissue, which, from the character it plays in the diseases of the eye, deserves to be dignified with the appellation of the *ocular fascia.* When carefully dissected out, it is found to be semi-transparent, strong and elastic, disappearing gradually upon the posterior part of the ball. It is remarkably well developed in the horse and ox, and I have always succeeded in making it out distinctly in the human subject. Considered in reference to its functions, it is of the same use to the conjunctiva that the cellulo-fibrous tunic, so well described by Cruveilhier, is to the stomach and bowels. It is the exclusive seat, in most instances, of the vascularity which characterizes inflammation of the sclerotic portion of the conjunctiva and of the effusions attending it, whether of serosity, of lymph, of blood, or of pus."

To the preceding account I have nothing to add, excepting that the ocular fascia is a most important structure in regard to the successful issue of the operation for strabismus, that it is much stronger in old than in young subjects, and that it is intimately connected with the straight muscles, passing from one to the other, and thus forming partial sheaths for them.

The other fascia, equally important in a practical point of view, has been named by Mr. Lucas, who has furnished a very good description of it, the *submuscular*, from its situation. It lines the posterior surface of the straight muscles, and, as it extends towards their insertion, is reflected off from them upon the ball of the eye as far as the optic nerve. It thus forms a sort of pouch, or cul-de-sac, which encloses the

adipous substance that exists in such abundance in this part of the orbit. In its structure, the submuscular fascia is somewhat stronger than the other, and consequently offers more resistance to the passage of a probe or other blunt instrument. Composed of cellular tissue, it passes from one muscle to the other, and is closely connected, in front, with the preceding, their substance being identified. The straight muscles are thus completely surrounded by these membranes, and hence, unless they are properly divided in the operation for strabismus, there must necessarily be a certain degree of failure, as the affected muscle will not be able to retract sufficiently to liberate the eye. Intending to revert to this point in a subsequent stage of the lecture, I pass on at once to the consideration of the more immediate object of our study.

Strabismus, or squint, as it is termed in common parlance, may be defined to be an aberration of the optic axes from their natural direction, by which the consent between the eyes is destroyed, and vision more or less impaired. The resultant deformity varies in different cases, from the slightest possible to the most disagreeable obliquity. The affected organ may be turned inwards or outwards, upwards or downwards, according to the muscle upon the derangement of which the squint depends. When the eye is directed inwards it constitutes what is called convergent strabismus; if, on the other hand, it inclines outwards, it is said to be divergent. The upward and downward obliquities have not received any particular names. As might be supposed, these different forms of strabismus do not occur with equal frequency. On the contrary, two of them are so exceedingly rare that I have not yet met with an instance, though I have examined the eyes of a very considerable number of persons affected with this infirmity. These two forms are the upward and downward, the latter of which is so seldom witnessed that it may well be doubted whether it ever occurs, except as the result of external violence.

The most common form of strabismus, by far, is the convergent, in which the eye is directed inwards, or inwards and

upwards. Of five hundred and thirty-six cases collected from various sources by a writer in the Philadelphia Medical Examiner, five hundred and six were of this description; a proportion which fully corresponds with my own but more limited experience. The degree of obliquity may be very slight, or so great that when the person looks directly forward with the sound eye, the cornea of the other shall be almost concealed at the inner canthus. It is worthy of remark that in this variety of the lesion, at least so far as my observation extends, the organ never inclines downwards, but almost constantly somewhat in the opposite direction.

Next in point of frequency is the divergent variety, but even this, in comparison with that just described, must be regarded as quite rare. Of eight hundred and sixty-six cases reported in the work above referred to, it was witnessed only forty-four times, and thus far I have myself seen only three or four examples of it. The eye in this form of strabismus is rarely drawn out very far, nor is it so apt to be attended with the same amount of upward obliquity as the convergent.

All writers on strabismus appear to think that, in the great majority of cases, only one organ is affected. Thus in the article in the Philadelphia Examiner, it is stated that the distortion occurred four hundred and fifty-nine times in one eye, and only forty-seven times in both. Dr. Dix, of Boston, in a small treatise on strabismus, makes a similar remark. Of fifty cases, which fell under his observation, the lesion is said to have been limited to one eye in thirty-six. Now I am convinced from a good deal of experience that nothing can be more unfounded than this opinion; which is so much the more to be deprecated, because it is calculated to lead to very serious errors in practice. I unhesitatingly assert that in nearly all instances, at least of convergent squint, both eyes are implicated, though not in an equal degree. Usually one is more affected than the other, which the patient considers as his good eye, as it is the one which he constantly employs in viewing objects. Nor is it at all surprising that this should be the

case, when we reflect upon the remarkable sympathy existing between these structures, and upon the fact that when one is diseased, the other is very liable to take on morbid action also. Amaurosis in one eye is very frequently followed by a similar malady in the other; the same is true of cataract and some other affections. In the natural state there is a perfect agreement between the optic axes, produced by the harmonious action of the straight muscles; but when this consent is destroyed, as it is in strabismus, the eyes lose their parrallelism, and their movements become partially involuntary, especially those of one eye. Be this, however, as it may, I feel certain that, if you will examine this matter for yourselves, you will be satisfied of the truth of what has been here said. The subject, it will be perceived, is one of paramount importance in respect to the results of our curative measures; for if, when both eyes are involved, we were to operate only on one, under an impression that the lesion was entirely limited to it, our success would necessarily be imperfect, or the attempt perhaps a complete failure.

I have already said that one eye is ordinarily more affected than the other, and this, if I mistake not, will be found to be the left in three cases out of five. Such, at all events, is the result of my own experience, which differs somewhat, perhaps, from that of others. Mr. Lucas thinks that the proportion in favor of the left eye is as three to two; and Dr. Phillips, of Leige, maintains that the right organ is much more frequently involved than the other. The statistics in regard to this question are, however, still very imperfect, and not a little additional observation is necessary before it can be finally settled.

It rarely happens that both eyes become deranged simultaneously; on the contrary, one generally squints first, and after a while the other, the interval being probably very short.

Whether strabismus occurs with equal frequency in both sexes, is a point for the determination of which we have no accurate data. Of thirty-three cases on which I have opera

ted, only five were females, whereas in the fifty cases published by Dr. Dix of Boston, only nineteen were males; thus exhibiting a most marked disparity in relation to the subject under consideration. The difference is perhaps not great either way, but as it is of no moment, in a practical sense, I need not dwell upon it longer in this place.

I come, secondly, to make some remarks on the exciting causes of strabismus. These, as might be imagined, are extremely numerous and diversified. One of the most frequent is imitation. Nearly a seventh of all the cases that occur are probably thus induced. Hence our school-rooms are a fruitful source of mischief in this way, one cross-eyed child being often the cause of strabismus in many others, simply from that habit of imitation to which all young persons are so much addicted. Ophthalmia, however induced, is another and a very common cause of strabismus. I have seen a number of instances of this kind, and others are mentioned by different authors. Convulsions, eruptive diseases, such as measles and scarlet-fever, hooping-cough, derangement of the digestive organs, injury on the eye, and difficult dentition, may all be enumerated as so many causes of the affection in question. Oftentimes it arises without any assignable reason, and when the person is in the enjoyment of the most perfect health. To place this subject in a more tangible form, I beg leave to present the following table, compiled from the writings of Melchior, Lucas, Duffie, Ammon, Phillips, and others, the number of cases being three hundred and twenty-three: *

Imitation, - - - -	61
Ophthalmia, - - - -	36
Convulsions, - - - -	31
Looking fixedly or suddenly at objects in youth,	16
Injuries inflicted on the eye, - -	15
Measles, - - - -	14
Hooping-cough, - - -	11

* Philadelphia Medical Examiner, vol. iv, p. 439.

Small pox,	11
Injury on the head,	10
Looking at objects on the eye-brow, nose, inner canthus, and thumb while held in the mouth,	9
Difficult dentition,	8
Falls and blows,	7
Inflammation,	5
Excessive fright,	4
Exposure to light and heat of the fire in infancy,	3
Intestinal worms,	3
Imperfect cataract,	3
Holding the head sideways while knitting,	3
Epilepsy,	2
Looking at the sun,	2
Amaurosis,	2
Burns of the abdomen,	2
Chorea,	1
Severe whipping,	1
Watching the motion of a shuttle,	1
Fit of crying	1
Concussion of the brain,	1
Fracture of skull,	1
Ill health,	1
Supposed congenital,	17
Unknown,	41
	323

Of the above cases, seventeen, it will be perceived, are supposed to have been congenital, a circumstance admitting, I think, of some doubt. Without altogether denying the possibility of this occurrence, I am inclined to believe that many cases, considered as congenital, are in truth not at all of this description, but that they arise soon after birth, without any obvious cause, and without any knowledge on the part of the parents or friends of the infant as to the precise period of the commencement of the lesion. Judging from what we know of club-foot, strabismus may unquestionably be a connate af-

fection, and such it certainly is in some instances; all I wish to impress upon your minds is, that it is much less frequent, in my opinion, than is generally supposed.

Some writers imagine that there is occasionally a hereditary predisposition to strabismus. This is doubtful. If we sometimes meet with cross-eyed children, whose fathers or mothers are laboring under the same affection, it by no means proves that the distortion was transmitted to them in the manner in which certain maladies are transmitted by the parent to his offspring. It only shows a coincidence, which may be explained, in the generality of cases, on the assumption that the children have acquired the distortion by imitation or by some other cause, not that it was entailed upon them prior to birth. In the same manner we may satisfactorily account for the presence of strabismus in several members of the same family, of which a remarkable instance has recently been brought within my own knowledge. Of three brothers, one has three children affected with strabismus, the other two, and the third one. The parents have perfectly sound eyes, and so have the uncles and aunts, except one, on whom I operated successfully on both organs several months ago. Last November I operated for cataract on three children, belonging to a gentleman from Mississippi, who informed me that of six others at home, three were affected with strabismus. Both he and his wife, as well as their immediate relations, are free from the affection.

Strabismus essentially consists in a morbid contraction of one or more of the muscles of the eye. This, as we have already seen, is usually the internal rectus. The shortening, which varies according to the extent of the squint, always leads to a corresponding elongation of the opposite muscle, so that it gradually loses, either wholly or in part, its antagonizing influence. But few post-mortem examinations have been made of the eyes of persons laboring under strabismus; nevertheless, they have been sufficient to show that there is generally a marked difference between the straight muscles, the one affected being not only wider and thicker than the rest, but also of a

deeper color. These changes were well seen in the case of a female who died at the Hospital last summer, under the care of my friend Dr. Lewis Rogers. She was upwards of thirty years of age, and had been affected with convergent strabismus from an early period. The left eye was more distorted than the right, and the internal straight muscle of that side was, as I ascertained by a careful examination, proportionably larger than the other. This, it is true, might have been a mere coincidence; but, supposing that it was not, and that the difference under consideration really exists, as a general rule, the question occurs, is this undue development the cause or the effect of the strabismus? This is a matter which is not so easily disposed of as might at first be imagined. As to myself, I presume that most cases of this affection are occasioned originally by some perverted action of the nerves which supply the muscles of the eye, rather than of any actual lesion of these fleshy bundles themselves. What the precise nature of this morbid action is has not, and probably never will be, determined; but it is reasonable to infer that it will be followed, sooner or later, by perverted action of one of the muscles at least to which I have alluded, and which must thus, by degrees, obtain a powerful ascendency over all the rest. The resultant distortion becomes permanent, and the affected muscle, constantly occupied in holding the eye in its unnatural position, acquires a corresponding degree of development; in accordance with a law of the animal economy that, in proportion as an organ is exercised, so will be its size and strength.

One of the most unpleasant effects of strabismus is the disagreeable deformity which accompanies it, by which the individual is rendered an object of remark and ridicule. Were this confined to infancy and childhood, no evils would flow from it, but when we reflect that it continues during life, and that it is a source of constant annoyance and mortification, the influence which it exerts upon the temper of the sufferer must often be of the most unhappy kind. On this account alone, if on no other, we cannot be too grateful to Stromeyer for

having devised, and to Dieffenbach for having first practised, an operation fraught with so much blessing to a class of beings whose cases were usually regarded, until recently, as beyond our resources. But there is another effect, if possible, of a still more serious character. I refer to the impairment of the vision of the affected eye. This, which is never wholly absent, always varies with the extent of the deformity, and the length of time that has elapsed since its occurrence. In some instances, especially in those of long standing, the sight is altogether destroyed, the retina being as insensible as in confirmed amaurosis. In another series of cases, the person is myopic, or sees objects only at a short distance. In a third series the vision, perhaps, is double, or objects appear indistinct, or run into each other, the image painted on the retina being confused and imperfect.

It is a well-known fact that strabismus has no tendency towards a spontaneous cure. On the contrary, it generally manifests a disposition to increase, and this is particularly the case in children of a nervous, excitable temperament. Indeed, the very worst forms of squint I have ever seen occurred in persons of this description. The question, then, arises, at what age ought we to operate? My opinion decidedly is the sooner the better. Provided the child is in good health, and not under a year of age, I would not hesitate a moment to resort to the knife for its relief. And why should we? The operation itself is not particularly painful, and if it be attempted at an early period it will commonly be necessary to perform it only on one eye, whereas if it be deferred until the age of twelve or fifteen, as has been suggested by some, we cannot possibly get along without dividing the corresponding muscle of the opposite side. Moreover, the sight in the meantime will become considerably impaired, and the patient be an object of ridicule and insult; both of which may thus be avoided. But there is another, and, as I conceive, a very strong reason, for the early performance of the operation. We have already seen that the ocular and submuscular fasciæ are much more delicate and elastic in infancy and childhood

than at the subsequent periods of life, and they will not therefore, be so liable, if they are not extensively divided, to interfere with the success of the operation. But it may be urged that a resort to the knife at this tender age will be both difficult and dangerous; difficult because of the struggles of the little patient, and dangerous because of the great susceptibility of the nervous system. In regard to the first of these points it may be stated that the resistance will never be so great but that it may be surmounted by proper management; and, as respects the other, it is well known that it has been vastly overrated. Much severer operations are frequently performed at a much earlier period. I have seen the common carotid artery tied, successfully, in an infant of six months, and have myself repeatedly operated, with similar results, for hare-lip, and that too in the very worst forms of that malformation, within the first year. I do not, therefore, in these objections, discover any adequate reason for postponing the division of the affected muscle.

The instruments which I employ in this operation are two lid-holders, a double, sharp-pointed hook for fixing the eye, a pair of forceps for pinching up the conjunctiva, and a scalpel or pair of scissors for dividing this membrane, the two fasciæ, and the affected muscle. The lid-holders (fig. 1) are each about six inches long, made of steel, quite slender, and slightly curved at the extremity, which is perfectly smooth and polished, constructed after the manner of a fenestrated speculum, and not more than four lines wide. These instruments may be conveniently replaced by a common speculum and the finger of an assistant; still, they are very useful, and I prefer them to any other contrivance I have seen. The hook for fixing the eye is similar to that contained in our eye-cases, (fig. 2). It should not exceed five inches in length, and should be provided with a moveable slide, so as to admit of the proper separation of the branches, each of which, two lines wide, terminates in a short hook as delicate as the finest needle. The forceps should also be rather small; and the blades of the scissors,

curved on the ege, should form an angle of about 35° with the handle; they should be very narrow, and their extremities only moderately sharp. Until lately I was in the habit of employing a knife instead of the scissors, and also a curved director for elevating the muscle previously to dividing it; but as this procedure is painful, and does not expedite the operation, I have abandoned it. I now use the director (fig. 3) only to ascertain the extent of the incisions, and in this respect it is really a valuable instrument, though a common probe will answer just as well.

Previously to commencing the operation, the patient should be placed on a table of convenient height, covered with a blanket, and the head and shoulders elevated with pillows. His face, lying horizontally, should look towards the light, which, however, for obvious reasons, should not be too strong; and the sound eye be covered with a bandage or handkerchief, to enable him the better to roll the other outwards. If the surgeon is ambidexter it does not matter where he stand; but if he uses one hand more adroitly than the other, he should place himself on the right side when he wishes to operate on the left eye, and, conversely, on the left, if he desires to operate on the right. Only two assistants are necessary; one of whom, standing at the head of the patient, elevates the upper lid, and holds the eye by fixing the sharp hook into the sclerotic coat, about two lines behind the cornea; the branches should be separated one third of an inch, and the interval between them should accurately correspond with the horizontal diameter of the eye. This precaution should never be neglected, otherwise it will not be so easy to find the affected muscle. The points of the hook should be fairly implanted into the substance of the sclerotic tunic, but no more. If it be passed simply through the conjunctiva, it will be impossible to steady the eye, to say nothing of the danger of lacerating that membrane, and so inflicting unnecessary pain upon the patient. On the other hand, if it be pushed through the sclerotic coat, serious mischief, eventuating in destructive inflammation, might be the consequence. The other assistant, placed on the

side of the affected eye, depresses the lower lid, and hands the sponges to the operator. It is sometimes more convenient to let this assistant steady the eye.

Every thing being thus prepared, the operator pinches up a small fold of the conjunctiva immediately behind the hook, or, in other words, about two lines from the cornea, and makes a slight vertical incision through it with the knife or scissors, as he may prefer. Relinquishing his hold with the forceps, the edges of the wound will be found to retract, so as to be at least from four to six lines in length by two or three in breadth. At this moment there is usually some degree of hemorrhage, amounting occasionally to more than half a tea spoonful, especially if the incision has been made too far back, near the semi-lunar valve, where the parts are always more vascular than further forward. To arrest this, a small sponge, pressed out of cold water, should be repeatedly applied; or, if it prove troublesome, the operation may be entirely suspended until it ceases. The ocular fascia is now divided, and, as soon as the muscle (fig. 4) is fairly exposed, it is cut across with the scissors, one of the blades of which is passed behind it. The moment this is accomplished, the eye, from the traction exerted upon it by the hook, springs towards the opposite side, and the muscle retracts within its sheath, especially if it has been thoroughly liberated from it connexions with the ocular and submuscular fasciæ. To effect this, which I regard as of paramount importance, the scissors should be passed for some distance around the eye, nearly as far, indeed, as the margins of the adjacent straight muscles.

As soon as the muscle is fairly divided, the eye usually resumes at once its natural position in the orbit, moving, if the other be sound, in perfect harmony with it. Occasionally, however, it retains some degree of its original obliquity; in which case it becomes necessary to re-apply the instruments with a view of ascertaining the cause of the malposition. This will generally be found to depend upon an imperfect division of the muscle, or of one or both fasciæ, by which the muscle is prevented from retracting sufficiently within its

sheath. In some instances it remains without any assignable cause, but rarely beyond a few minutes, or, at farthest, a few hours.

The operation being completed, the eye is bathed in cold water, to free it of blood, and the patient is confined for a few days in a dark chamber. Light diet should be enjoined, and, if inflammation arise, recourse must be had to antiphlogistic measures. Bleeding can seldom be demanded; thus far I have not been obliged to resort to it in a single instance, a dose of salts, oil, or calcined magnesia being all that was required, and in some even this was not necessary. As a local application, cold or tepid water, as may be most grateful to the part, is amply sufficient. Occasionally there is a good deal of pain soon after the operation, with more or less constitutional disturbance, such as slight shivering, headache, and nausea; these symptoms are best relieved by warm drinks and an opiate. The ecchymosis which attends this operation, and which is sometimes considerable, requires no particular treatment: no inconvenience arises from it, and it commonly disappears in a few weeks. I have never known suppuration or abscess to follow this operation, but several cases are related by writers. Such an occurrence implies unusual violence, which cannot be too much condemned. The same remark is applicable, still more forcibly, to the division of the sclerotic coat, and the partial escape of the humors of the eye; an accident which has happened in the hands of some ignorant bunglers. For five or six weeks after the operation the patient should refrain from reading and looking at minute objects. By neglecting this precaution chronic inflammation, with weakness of sight, may be induced and kept up for several months, much to the annoyance of the sufferer.

It may not be uninteresting briefly to inquire into the process employed by nature to repair the wound made in the operation. From the distance at which the edges are separated from each other, it is obvious that it cannot heal by union by the first intention; nor have we any means of remedying this difficulty, since it is impossible in parts so delicate as

those under consideration to employ the suture. Soon after the operation is over, the margins of the incision become coated with coagulating lymph, which is sometimes effused in such quantities as to give rise to considerable pain and a sensation like that produced by the presence of some foreign body. The vessels in the surrounding structures are somewhat enlarged, there is more or less lacrymation, and the lids feel stiff and uncomfortable. The sclerotic coat at the bottom of the wound remains visible for five or six days, when it becomes covered with granulations, which, uniting with those of the sides, gradually fill up the breach, the whole process, from the commencement to the completion of the cicatrization of the conjunctiva, occupying from two to four weeks.

Occasionally, though not always, the process of cicatrization is retarded by the presence of fungus granulations. When this is found to be the case, they should be snipped off with a pair of scisors, a proceeding far preferable to the application of the nitrate of silver, which is not only more painful, but less effectual.

It has been recommended by some surgeons that as soon as the soreness occasioned by the operation has subsided, the patient should begin to turn the eye outwards, and that these efforts should be daily persevered in, until it regains its natural position in the orbit. In my early cases, before I had devoted much attention to the subject, I adopted this advice, but the result in every instance disappointed me. Nor do I now perceive any good reason for following it, persuaded as I am that it is not founded upon correct principles. Where the eye still retains some degree of obliquity after the operation, it may be positively assumed that the section of the affected muscle, or of its investing fasciæ is imperfect; how then, when this is the case, can we look for success? Again, the eye operated on may be entirely straight, and yet not move in concert with the other. This I have witnessed repeatedly, and hence my invariable rule, under such circumstances, is, to divide at once the corresponding muscle of the opposite side, for the reason already mentioned, in a former part of this dis-

courue, that the distortion almost invariably involves both organs.

The operation for strabismus is liable to occasional failure, the principal causes of which may be thus enumerated: 1. Imperfect section of the affected muscle or of the ocular and submuscular fasciæ. To this subject I have already several times adverted, and I need therefore only further remark concerning it that the operator should never neglect to divide these structures most thoroughly. In bad cases the scissors must be carried up and down as far as the contiguous straight muscles, so as to denude completely the sclerotic coat for more than a third of its circumference. The fasciæ must be effectually raked up, otherwise it will be impossible for the muscle to retreat within the orbit. 2. Excision of a portion of the conjunctiva, eventuating in contraction of this membrane during the process of cicatrization, may be considered as another cause of failure. As there is no necessity whatever for such a proceeding, since it does not in the slightest degree facilitate the operation, I need scarcely say that it should be most studiously avoided. 3. Strabismus is sometimes complicated with other diseases, such as convulsions, epilepsy, hydrocephalus, and similar lesions. When this is the case the operation cannot be performed with any prospect of success, and had better be declined altogether. The existence of amaurosis does not necessarily lead to failure; if cataract be present, it should be broken up either at the time of the operation or before. 4. But the most powerful cause of all in my opinion, and one which has not been sufficiently insisted upon by writers, is the co-existence of strabismus in both eyes, and the fact that our operative procedures are usually limited to one of these organs. Now this is at direct variance with good practice and common sense. In several instances in which only partial success attended my efforts, the cause was entirely ascribable to this circumstance, and so thoroughly am I persuaded of its importance that I have laid it down, as a rule, never to operate on one eye only when it is certain both are affected. The only exception to this is where the patient

is very young, when the section of a single muscle will sometimes suffice, though even then not always. 5. A fifth cause of failure is the re-adherance of the posterior extremity of the muscle to an unfavorable point of the sclerotica, by which it is again enabled to exert an undue influence over the movements of the eye. The manner of obviating this difficulty has been already indicated, and I need not therefore dilate upon it in this place. These, I believe are the principal circumstances which interfere with the success of the operation; there may be others, but they are unimportant and such as will readily suggest themselves to your minds.

I come now to speak, in the last place, of some of the effects of the operation. These may be considered, first, in relation to the deformity or obliquity of the organ; secondly, in respect to the sight; and lastly, in relation to the prominence of the eye and the separation of the lids.

When the operation has been well executed, the deformity, as was before mentioned, disappears either instantaneously, or, at all events, in a few hours, and the organ, there is reason to believe, ever afterwards remains straight. It is true causes may subsequently arise which may lead to a relapse, or return of the obliquity, but this must certainly be very rare, and is to be regarded altogether as an exception to the general rule.

The effect upon vison is at first rather disagreeable than otherwise; at least this is true in some instances. It is only by degrees that the affected organ regains its function, and in many cases a considerable period must necessarily elapse before this is fully brought about. Occasionally, in fact, the retina, from long disuse, or other causes, is so completely paralysed that the sight is never restored, and it is in cases of this description that we should always look for a slight return of the distortion. Another effect, and that a very unpleasant one, which is sometimes witnessed, is double vision. This is evidently dependent upon a want of agreement between the optic axes, and seldom lasts beyond a few days, unless the distortion has been but imperfectly remedied.

The only other effect which I shall notice as attendant upon this operation is a peculiar prominence of the eye. It is generally very well marked, though not equally so in all cases, and imparts to the organ a full, bold expression; it is accompanied by a considerable separation of the lids, and is caused by the liberation of the eye from its confined state.

In speaking of the operation for strabismus, I did not deem it necessary to give you an account of the various plans that have been suggested by other surgeons; I pointed out to you the mode which I have myself been in the habit of pursuing, and which I can confidently recommend to your notice, not only as safe and expeditious, but as effectual perhaps as is compatible with the nature of the affection which it is intended to remedy. There is one method, however, to which I must briefly refer, as well on account of the high authority from which it emanates, as on account of its supposed advantages. I allude to to the *subconjunctival plan*, as it is termed, first devised by Mons. Guerin, the celebrated orthopedic surgeon of Paris. The manner of performing this operation in convergent strabismus is as follows: The patient lying on a bed or sofa with his head somewhat elevated, an assistant separates the lids, while the operater inserts the double hook in the same manner and at the same distance from the cornea, as in the ordinary method. Another assistant with a delicate hook lifts up a fold of the conjunctiva, midway between the cornea and the semi-lunar valve, when the surgeon, armed with a lancet-shaped scalpel, makes an aperture into that membrane on a line with the inferior margin of the muscle, carrying the point at the same time backwards to open the investing fasciæ. Another knife,* (fig. 5), peculiarly adapted to the operation and which you here see, is then carefully insinuated beneath the tendon with the side of the blade resting nearly flat upon the sclerotic coat, when, turning the edge forward, the division of the structure in question is easily effected, being attended, it is said, with a distinct snapping sound.

*For this instrument I am indebted to my friend and former pupil, Dr. Charles A. Pope, who spent several years in Paris, and who is now settled in St. Louis.

Having never operated according to this method, I can not of course say anything about it from my own observation. Dr. Davenport, of Boston, who has executed it in two cases, thinks it posesses strong claims to a more extended trial, and enumerates the following supposed advantages: First, there is little or none of that unpleasant gaping at the inner canthus which sometimes so much disfigures those who have undergone the common operation; and secondly, there is less risk of severe inflammation, or suppuration, the patient, from the absence of an open wound, being able to go about in a short time without inconvenience or fear of injury. Both these advantages are, it appears to me, in great degree, if not wholly, imaginary; at all events, I have never, in a single instance, witnessed the disagreeable gaping spoken of by Dr. Davenport, much less any violent inflammation, or the formation of purulent matter. On the other hand, it is always attended with incomparably greater difficulty of execution, its results are more uncertain, from the impossibility of determining what parts have been divided, and lastly, it is invariably followed by extensive ecchymosis, not only of the eye, but in many cases also of the lids. For these and other reasons that might be assigned, I would discourage the adoption of Mons. Guerin's operation.

The operative procedures above described have more especial reference, it will be perceived, to convergent strabismus; with slight modifications, however, they are equally applicable to the other forms of the lesion. From the more exposed situation of the ball of the eye, the outer straight muscle is much more easily approached and divided than the internal: as to the relative facility of operating on the upper and lower, I can say very little from personal experience, but should suppose the difference, if any, to be trifling. Nor have I had occasion to cut either of the obliquc muscles, and from what knowledge I possess on the subject, I am greatly disposed to doubt whether they have much, if any, agency in the production of strabismus. In several instances in which these fasciculi were divided by Lucas, Calder, and others, no im-

pression whatever seems to have been made upon the distortion, and nearly all surgeons agree in the opinion that they should not be interfered with.

Attempts have been recently made, both in this country and in Europe, to disparage the operation for strabismus, on the ground tnat the eye has a tendency to return, in a short time, to its original malposition, or that a new deviation will sometimes occur. No proof, however, of such a result, founded upon an adequate number of statistical facts, has yet been given to the profession. On the contrary, we have reason to believe, from the results that have been furnished by different surgeons, that the reverse usually happens, the operation, instead of being useless, as many have asserted, being generally attended with the most complete success. From most of my own cases being scattered over the country, I have received authentic information, as to the results of the operation, from ten only, of which eight are perfectly successful, a year or more having elapsed since the operation was performed on some of them. In these ten cases both the internal straight muscles were divided in six, in the other four one only. The former have all turned out favorably; of the latter, two have partially failed, or, rather, they have been successful as far as concerns the eye that was most affected, and the only one operated upon. Within the last few months, Dr. J. B. Dixon,* of Norwich, England, has published a list of forty-one cases of convergent strabismus, treated by division of the internal straight muscles, and which one year afterwards presented the following results: in thirty-one, both eyes were perfectly natural; in five, where one organ alone was operated upon, there was slight obliquity of the other; in two cases the squint was changed to a leer; and in three others the eye returned to its original malposition. These results are in the highest degree gratifying, and they are sufficient to show that the operation for strabismus deserves to be ranked among the established resources of surgery, which seldom exhibits such an amount of

* Boston Medical and Surgical Journal, Dec. 29, 1842.

successful terminations. Let me close the discourse, gentlemen, by laying down this maxim for your guidance in regard to the subject we have been considering—"*Never operate on one eye only, when you are certain, as you may be in ninety-nine cases out of a hundred, that both are affected.*"

ART. II.—*Phlegmasia Dolens.* By JOHN HARDIN, M. D., of Horse-Well, Kentucky.

It is not my purpose at present to inquire whether phlegmasia dolens is an inflammation of the veins or absorbents, but to suggest a method of treatment which has been pursued with great satisfaction by myself, and also by my friend Dr. Jett, of Munfordville, a very accurate clinical observer, who has recently had an opportunity to test its efficacy.

In 1837, I was requested to visit Mrs. C., who had some days previously given birth to her third child, and had been for several hours the subject of swelled leg. The pain and swelling commenced at the ankle, and had already reached the groin. I immediately applied a strong cotton roller, comfortably tight, to the whole limb, commencing at the toes and terminating with a turn around the hips, to secure it *in situ*, and directed bathing with warm water to allay pain. The lady stated that she had bathed the limb, before my arrival, with warm whiskey, in which red pepper was steeped to saturation, and had found very considerable mitigation of pain therefrom; whereupon I directed the substitution of this mixture for the warm water. It gives me pleasure to say that the application always gave immediate relief. The experiment was frequently tried, without the patient's knowledge, of wetting the roller with warm spirit alone, but it did not allay the pain; and this was tried so frequently, and with the result so unvarying, that I was satisfied it could not be imaginary. In the constitutional treatment of this case, small portions of ipecacuanha were given

at intervals of four hours, which operated as a cholagogue cathartic. No other medicine was used. Mercurials would have been administered in the beginning, but from the scorbutic appearance of the gums, the unpleasant local effects of the medicine were apprehended; and after the operations procured by the ipecacuanha were observed, nothing else was deemed necessary. In ten days the leg was well, there being only a slight, painless swelling remaining. At this time the disease attacked the other limb, and, under exactly similar treatment, was subdued in thirteen days.

Since that time, three other cases have been treated in the same manner (I mean the local treatment), and have terminated favorably, one in ten, and the two others in twelve days. In one of them, several doses of calomel and rhubarb were administered. Of course, in this, as in all other diseases, the internal remedies must be adapted to the constitutional disturbances present. In some of the cases the pain and swelling commenced in the groin, and progressed downwards to the foot.

In a disease attended with pain so excruciating as that under consideration, and one which renders the patient so utterly helpless, the advantage of the above method of treatment is incalculable, whether it be considered in reference to its power of allaying pain or of abridging the duration of the malady. The pain is absolutely under the immediate control of the remedy. In all the cases, about one gallon of the lotion was used in the first twenty-four hours, after which a quantity varying from a pint to a quart was found to be sufficient.

Believing that facts are more important as well as more acceptable to the profession, than speculations however ingenious, I submit these, unburthened with theoretical reflections.

Feb. 12th, 1812.

Bibliographical Notices.

Art. III,—*Proceedings of the Physiological Temperance Society of the Medical Institute of Louisville.* 1842, pp. 16.

This little pamphlet presents the proceedings of a Society which we announced in our January number. The time through which they run is two months, during which the Society obtained a charter from the State of Kentucky, had a certificate of membership lithographed, and a seal engraved; listened to four lectures, a report, and a valedictory, and acquired as members 137 out of the 263 pupils of the Institute. In the proceedings there are abstracts of the lectures, and a discourse, but we shall pass them by to insert the *Report*.

The Committee appointed to report how far the promotion of temperance should be regarded as a professional duty, offered the following, which was adopted and ordered to be published.

REPORT:

Extensive as may be the use of liquors rendered stimulating with alcohol, and intimately as they may be blended with our food, and the various innocent condiments, with which we stimulate ourselves, there is not, in the opinion of your Committee, the smallest necessity for their use as beverages. They impart no nourishment, and the excitement which they raise, is not only transient beyond that of many other stimulants, but followed by a degree of exhaustion, which more than counterbalances their exciting effects. Those effects, moreover, are chiefly found in the bodily desires and lower passions of the mind; and do not, therefore, prepare the individual for his duties, but, on the contrary, incapacitate him for them; which is equally true of

labors that require strength of muscle, acuteness of bodily sensibility, soundness of judgment, or tranquillity of feeling.

Nor does the habitual use of alcoholic beverages ward off any form of disease. Your Committee might, but will not, insist, that there is *no* epidemic, in which these beverages would be preventive; but they fearlessly affirm, that if there be such, the individual who has been rigidly abstinent, up to the time when he begins their use for that purpose, will be far more likely to be benefited, than he who has habitually drunk them. To the strictly temperate, they would be medicines, and might, under proper circumstances, be preventives. There are, then, no physical reasons for the habitual use of alcoholic drinks.

Let us proceed to inquire whether there be physiological objections to their use; in other words, whether they occasion diseases.

1. An agent of such great activity as alcohol, cannot be used in large quantities, without injury to health. If the excessive use of the *supporters* of life, such as food, or warmth, or air with an over proportion of oxygen, be prejudicial to health, it will be admitted, that an agent which does not, in any manner or degree, contribute to nourish the body, and is still capable of exerting on it a powerful effect, must, if used in large quantities, prove a poison. Your Committee are willing to grant, that in smaller quantities, which they cannot undertake to define, alcohol may not disorder the functions. But they concur with universal experience, when they declare, that in the use of this, as well as other narcotic stimulants, there is a constantly increasing demand by the constitution; that this demand is much more importunate in some temperaments than others; that it is strictly physical; that in proportion as it increases, the will and moral powers of the individual are weakened; and, therefore, that the danger is imminent, that the person who begins with the temperate, will end with the intemperate use of whatever alcoholic beverage he may select. The diseases generated by this excess are various, according to the variety of drink, the age and temperament of the individual, his occupation, and the circumstances which surround him. Those which your Committee have most frequently observed in this country, are inflammation of the liver, followed by jaundice and dropsy; inflammation and ulceration of the mucous membrane of the stomach and intestines, with obstinate diarrhœa; vomiting, hawking and pyrosis in the morning, and in advanced cases, almost total loss of appetite; obstinate rheumatic inflammation, and occasionally gout; a mild bronchitis with cough, accompanied by a dirty, mucous expectoration, and an offensive breath; chronic inflammation of the eyes, with puriform discharge; nettle rash and leprosy; inflammation of the brain; epileptic convulsions; tremors and debility of the muscles; palsy of some of the muscles of the face, or one of the limbs, or of one side of the body; apoplexy; death.

Not wishing to present what might seem to be an exaggerated pic-

ture, your Committee forbear to extend this dark catalogue, leaving each member of the Society to add to it the results of his own future observation.

2. When none of the diseases, just enumerated, are developed, the abuse of intoxicating drinks very often creates a constitutional lesion or distemperature, which renders wounds and other injuries, and noxious impressions of various kinds, dangerous beyond what they would be under other circumstances. Thus a slight injury has sometimes led to uncontrollable and fatal inflammation and gangrene, in those who drank to excess; and no discreet surgeon would choose to perform an important operation on an individual who was habitually intemperate.

3. Intemperance multiplies diseases and shortens human life, by the exposure to which the intemperate are subject—1st, to mechanical accidents of various kinds—2nd, to the burning sun, producing *coup de soleil*—3rd, to severe cold, occasioning the loss of parts of their extremities, frequently of life itself—4th, to the neglect of personal cleanliness, causing a filthy and pedicular state of the skin—5th, to various vices, which become causes of disease. Thus drunkenness is the indirect cause of as many diseases as are directly produced by it.

But the ravages of intemperance are not limited to the body, for through it they are propagated to the mind. Sleeplessness, disordered hearing, seeing and feeling; reverie; delirium; monomania, and general madness, ending in fatuity, and leading to suicide or murder, are among the legitimate and melancholy effects. Alcoholic intemperance demands, then, the interference and aid of the medical profession, and, in the opinion of your committee, is not unworthy of deep and anxious attention. It would be superfluous for your committee to affirm, that the duty of laboring to prevent or avert diseases, is one of which no medical man can divest himself. But, still further, every profession, as an aggregate body, lies under some peculiar responsibilities of benevolence, and in its corporate capacity should prosecute them as public enterprises; and that assumed by our Society, your Committee regard as of this kind, and hope it will be so regarded by the profession at large. It only remains, then, to consider what can be done. 1. The members of the society, and of the profession generally, may accomplish a great deal by instruction, admonition and warning, put forth while mingling with the people in their daily exercises of duty. 2. They may exert themselves in practice, co-operating with those who benevolently labor to suppress intemperance, and, in fact exerting, if they choose, a more diffusive and salutary influence than any other class of men, because of their superior knowledge of the subject, and the confidence which the community at large repose in them on a subject so strictly professional. 2. They may sometimes make, with the consent, and even at the request of the intemperate, such administrations as will raise a disgust at alcoholic stimulants; they may supply excitements of a different kind to those who would seek substitutes; they may assure the deeply

besotted, that they need not apprehend death from an instant discontinuance—and when such discontinuance is commenced, they may prescribe for the relief of the symptoms which arise from it. 5th, and lastly. They may refrain from drinking themselves, thus giving authority to their precepts and efficacy to their exhortation. Their salutary example would surpass, in its influence, that of any other class of men, while they would preserve themselves from intemperance, and redeem their profession from the opprobrium under which it has rested since it first had an existence in the West.

Your Committee know, from observation and report, and are most happy to testify, that intemperance is much less prevalent in our profession than it was thirty years ago; and they believe that diminished drinking by physicians, is one of the causes of diminished drinking by the people; but there is both room and necessity for further reform on this point, and your Committee indulge the hope, that the present and still more the future labors of our Society, will be influential in its promotion.

DANIEL DRAKE,
ALFRED MOORE,
J. BERRIEN LINDSLEY,
ALFRED ADAMS,
E. W. HORRELL,
} Committee.

We must also transcribe the following notices, commending them to the consideration of our readers.

DONATIONS TO THE LIBRARY.

Having commenced the formation of a library of works on intemperance, the Society respectfully solicits of authors, publishers, and all other persons—books, lectures, discourses, orations, addresses and reports. It is desirous, also, to obtain publications on the effects of opium, tobacco, and other narcotic stimulants. Such as are usually transmitted by mail, may be forwarded through that channel, others by private hand as opportunity may offer. The whole to be directed—'Physiological Temperance Society of the Medical Institute of Lou-'sville, Kentucky."

ORIGINAL CONTRIBUTIONS.

Intending to make a publication of its proceedings, annually, the Society is desirous of receiving original communications, of every kind, falling within its purview. Long as intemperance has prevailed in the world, the materials for its history are still imperfect, leaving ample opportunity for further observation and experiment. Our familiarity from childhood, with drunkenness, is one of the causes why our observations, as professional men, have not been so full and accurate as on many other forms of disease. The present wide

spreading conviction, that alcoholic drinks are not only unnecessary but pernicious; in short, that their effects are morbid, will turn both the profession and the people to a closer study of them as diseased states; and thus many new facts will be brought to light. All communications of this kind should be directed to the Corresponding Secretary of the Society.

We trust that these requests will not be made in vain.

ART. IV.—*Twenty-fourth Report of the McLean Asylum for the Insane.* By LUTHER V. BELL, M. D., Superintendent. Boston, 1842, p. 40,

We have read this document with great satisfaction. Like its predecessors, it is filled with important suggestions relative to the management of the insane. The statistical tables are not so copious as we would like to see—we believe them to be important elements for the formation of our opinions as to this or that place, or mode of treatment. Notwithstanding they are often abused, and made to convey more meaning than their elementary facts justify, yet they are the safest method by which we can approximate truth, in medicine and the other inexact sciences, as well as in the stricter sort; and we are very sure, that tables, founded upon the careful and conscientious observations of Dr. Bell, could not lead us astray.

The usual success of former years has followed the labors of Dr. Bell during the last year. In that period, he had 283 patients under his care: Of these, seventy-five recovered; twenty-nine were discharged stationary, twenty-four improved; two were unfit subjects, eleven died, and one hundred and forty-two remained in the asylum at the end of the year. Many of the improved were taken away by the impatience or economy of friends, and the stationary were discharged, for want of accommodations, to make room for the more hopeful. Even with these disadvantages of reckoning, we find sixty per cent. of all discharged were cured, which is a much larger success than the average of asylums has exhibited.

Dr. Bell, through his report, offers valuable considerations upon the treatment of insanity—upon the errors which common statistics unintentionally convey, for want of sufficient explanation of the minuter circumstances—and lastly, upon "the relative value of medical and moral means of treatment." Upon this last head, the views of this faithful and practised observer are peculiarly valuable.

"Each year that I have passed in this extensive field has served to diminish my confidence in an active medical treatment of almost every form of disease of the mind, and to increase my reliance upon moral means. No individual at the head of an insane institution would now think of combating any form of insanity, with the depletory and reducing means once regarded as indispensable. The practice of bleedings, violent purgations, emetics, vesicatories and derivatives, has passed away before the light of experience. A different and opposite mode of treatment by energetic sedatives, I am satisfied, is obnoxious to many objections, although far to be preferred to the first. The recoveries under their administration, occasionally most magical and most gratifying in appearance and for the present, as far as my observation and experience have extended, are neither so perfect nor so permanent as under a less decided course of measures. A *wise expectation* and a cautious use of medical agents to meet symptoms, comprise most of the aids that the pharmacopœia is capable of affording. But in relation to moral means, especially carried through as they can be only by the instrumentality of an appropriate institution, my annual experience has only exalted my confidence."

To carry out these views, it is necessary that the superintending physician should not only visit, but live in the asylum, live with and among his patients, watch every symptom and every movement, be ready for every emergency, and make his moral means as active as the varying course of his patient's diseases may require.

Under the head of moral means, Dr. B. includes, 1. Separation from friends and ordinary associations, and also the interdiction of visits, letters and the like. 2. Direction, including the application of such means as are adapted to the varying circumstances, developments, tastes and symptoms

of the different patients. 3. Classification. 4. Occupation, with every variety of employment whether useful or amusing.

Dr. B. urges upon the friends of the lunatic, to become well acquainted with the nature and conditions of the insane asylum in which they wish to place their deranged patient; "to ascertain whether they can rely upon its faith, its skill, and its kindness;" to inform the lunatic clearly and distinctly of the object of his separation, of the character of the institution and of the nature of the confinement, and thus prepare themselves and him for a long separation, if the case should require it. Then, having made their selection of a hospital, in which they can trust their friend, and having determined to abide by the judgement of the officers as to his continuance, they should leave him, without distrust or intermeddling, in their hands. For this interference of impatient friends is, and has been, one of the greatest obstacles to the cure of the insane in private institutions, which have no power to retain their patients beyond the consent of friends abroad,

"We would again say to friends, do not bring your patient to us if you can do as well or better by him at home or elsewhere; do not bring him with the impression that you are to regulate his treatment, or that any peculiar knowledge you may have of his traits of character will enable you to decide, better than the institution, where he shall be placed in its classification, when or by whom he shall be seen, or when he is in a fit state to be removed. This asylum desires to receive no patients except on its own terms; it asks no patronage; it was established to confer not to receive benefits."

It would seem that the advantages of a residence in an asylum over one at home, for the insane, would need no further proof. But when we find that not an eighth of all the insane in the nation are sent to asylums, that new cases are perpetually occurring, and are suffered to become chronic, and therefore incurable, from neglect, we are convinced that the case needs further argument and illustration. We cannot urge this matter too earnestly home to every physician and citizen, that most cases of lunacy can be cured by early removal from home and friends, from habitual associations, to a proper

asylum; and that on the contrary, most cases become hopelessly incurable, if not duly and seasonably attended to. The world, professional and non-professional, in its best condition, has not been made to feel the full force of this truth, and has, therefore, been negligent of this class of sufferers—No disease has been neglected like insanity. Derangement of the lungs, or of digestion, calls for and receives immediate and skilful attention; but derangement of the intellect or moral feeling, is strangely disregarded, or too often submitted to most quackish experiments. Hence we need to keep this subject continually before the people, until all are convinced of the necessity of early attention to the insane. Although so much has been written and published upon this in Massachusetts, still Dr. Bell finds it necessary to urge it again; and if it be needed there, where the matter has been so long discussed, it will not be out of place here, in this valley, where we have nearly four thousand lunatics and idiots abroad, and less than five hundred in our asylums.

The experience of all ages and all countries coincides in its importance, so that the general statement is fully warranted that patients seized with insanity and removed to an institution usually recover; while those treated at home generally do not. Not unfrequently removal alone has appeared adequate to effect an entire change of the diseased mental action.

If a patient be irritable, excited and violent, experience shows that he will not submit to friends as readily as to strangers. If feelings of hatred and vindictiveness exist, they will be probably directed towards those in whom he ought most to confide. If a master of a family and accustomed to direct, he will not readily and without reason as it appears to him abdicate his authority. If a child in his father's house, his insane sagacity will at once show him that he need not yield peaceably the government of himself, where the tender feelings of an afflicted family will deny the firmness to insist. If restraint becomes indispensable, a wide difference will be found in its application as administered by new hands, and by those whose experience has taught them that mildness and decision are not incompatible, and that strength and violence may distress and aggravate, but do not often calm the maniac. There should be, in fact, as much difference in a well

regulated institution in the character and extent of physical force necessary to control a dangerous patient, as applied by experienced and well disciplined attendants, and the ordinary aids called to effect the same objects in families, as there is between the leathern mittens and secure rooms of an asylum, and the chains, strait waistcoats and cages, which are deemed indispensable in furious cases without the walls of a hospital.

If hallucinations and delusions constitute the leading features of a case it is almost impossible for a patient to be removed from conversations and associations continually renewing their strength in the mind, while at home or under the guidance of those unskilled. Friends and acquaintances can hardly avoid attempting the effect of argument, remonstrances, appeals to the feelings, or even threats. It is natural that those whose experience is limited to a single case, should do so; while they who have been taught by experience the futility of such attempts, will not aggravate and excite a diseased point with continual meddling."

No part of an asylum is without its influence over the insane. It is not a matter of indifference how it is organized—nor who are employed to superintend, direct, or assist, in its administration. The superintending officers should have the highest intellectual and moral cultivation. Of their duties and responsibilities Dr. Bell says, "it can hardly be expected of the writer to touch." To those who knew him it was not necessary; for his life and practice were the argument and the explanation of these matters. But of the subordinate aids, he is more free to speak. "My present design is to urge the indispensable value of an elevated, intelligent, and conscientious corps of assistants, limited in number only by the extent to which they can be profitably and usefully employed. Had an institution a Pinel or an Esquirol for its head, with as perfect a suite of architectural arrangements as the ingenuity of man has devised, and were obliged to depend upon a few ordinary *keepers*, its character and its results must inevitably fall far below the practicable maximum."

"In cases of considerable duration, the prospect of benefit will depend upon the amount of persevering, well-directed labor which is bestowed. To secure such labor, an honorable appreciation and an adequate remuneration are requisite. In

this country, such services as those of the best attendance upon the insane, can only be had by a liberal expenditure of money. As so much aid is required in the full employment of moral means, it is manifest that a proper keeping and care of the insane, must always, as compared with the support of those of sound mind, be expensive."

"The assistants in the care of the insane must not only be well selected and well compensated, but well instructed. There are natural gifts of person, address and temper, which are not to be disparaged, but beyond these there is a tact, an aptitude, a discrimination in managing the insane, which can only be acquired by observation and practice, after being put upon the right track. Some persons with apparently adequate gifts of nature, never are able to acquire this art."

"The systemwhich has always been pursued here, is that of elevating the office of assistant. Neither the term *keeper* or *servant*, has ever been known in the intercourse of attendant and patient. The latter has always been led to look upon the former as a friend and equal." . . . . "The test question by which the character and fitness of every male and female caretaker of the insane should alone be tried is, whether under like circumstances, the director would desire his wife, children or parents, to be submitted to the same hands."

Classification is of great importance in the McLean Asylum, and the numerous buildings, and diversified arrangement of them, enable it to carry this to great extent. Thus not only injury is avoided, but great curative advantages are obtained.

"It will readily be conceived that to place a wild and frantic maniac in an apartment with a refined and timid individual, whose sole deviation from soundness is one false or delusive idea, or to permit a demented epileptic lost to all sense of decency and propriety, to sit at table with one whose intellect perhaps is unchanged, but whose affective sentiments alone are diseased, would be alike inconsistent with the happiness or recovery of the party capable of suffering." . . . . . "There is a nice adaptation of intellects, of social position, of cultivation of mind and manners to be arranged in consociation."

"Experience shows that the very highest curative advantages are effected by the mutual action and attrition of diseased minds upon each other. Emulation, forbearance, self-respect, benevolence, diversion of diseased ideas or sentiments into new and natural channels, are all capable of being secured by a proper association of different individuals."

Occupation, varied and well adapted, is still found beneficial in this institution. Dr. B. adds to his former testimony the confirmation of another year's experience of its good effects on the insane.

"The general law, both as regards the curative treatment or custodial comfort of the patient, is constant but varied occupation of body and mind. To ensure this, requires every opportunity and aid of labor and amusement. The more perfect the system of an institution, the more ample will be the provision to secure these ends. The different education, tastes and pursuits of individuals, will render it impossible to subject all to the same course in this respect. To one, agricultural or horticultural avocations; to another, mechanical employments; to a third, the fine arts or some form of busy idleness must be adapted."

Nor are these all the moral means of treating insanity.

"There are still other adjuvants, such as judicious counsel, explanations, and at a proper time even reasonings, a proper participation in the services of religion, and a regulated intercourse with the sane, all of which are of the highest utility."

We have been thus free in our extracts from this report, because this asylum is one of the oldest and best in the country, and has taken the lead in most of the improvements of the present age in the management of the insane; moreover, the full and elaborate reports of its able superintendent have described the principles and details of practice there, and we are glad to give his views a wider diffusion in the west, than they could have through his report alone.

The following extracts from "the directions for admission" are as applicable to the patients, and as useful to the asylums in the west, as they are to the McLean, from which they emanate.

"It is desired that no case (unless certainly of the most recent duration,) should be sent to the institution, unless it is determined and arrangements made, to afford a fair trial. No time short of six months can justly be considered a fair trial, and to place a patient afflicted for many months here with the determination to remove him at the expiration of a single quarter, is an injustice to the Asylum, and to the general cause of the insane.

It is presumed that the friends and guardians of every patient placed here, are satisfied that they can rely upon the skill, kindness and integrity with which he will be treated, and that they can do no better with their charge. Having arrived at this conclusion, as they should do, before committing their friend to its cares, it will be recollected as a part of the covenant, that the discretion of the Superintendent is to decide in every case upon the patient being seen by friends, or acquaintances or strangers, or visits being absolutely interdicted."

This Asylum is under the care of a Board of Trustees, who. by their sub-committees, visit the institution weekly. This duty of visitation has not been omitted for twenty-four years, with the exception of a single week. This is a guaranty for the faithfulness of these officers to their charge, and that no neglect or abuse, in those who have immediate care of the patients, can escape notice. E. J.

Art. V.—*The Principles and Practice of Obstetric Medicine and Surgery, in reference to the Process of Parturition: Illustrated by* 142 *figures.* By Francis H. Ramsbotham, M. D., Consulting Physician in Obstetric Cases to, and Lecturer on Obstetric and Forensic Medicine at, the London Hospital, Physician to the Royal Maternity Charity, Obstetric Physician to the Eastern and Tower Hamlets' Dispensaries. First American edition, revised: pp. 458, large octavo. Lea & Blanchard, Philadelphia, 1842.

The author of this work is the son of a celebrated English obstetrician and writer on obstetrics, and is himself already favorably known by his lectures and writings upon this department of medical science, the former of which were given to the profession through the London Medical Gazette, in 1833–4. He has also, we believe, published an "Atlas of Midwifery." Having the immediate benefit of the vast experience of his father, joined to that acquired by himself in an extensive pub-

lic and private practice, he could not fail to produce a highly valuable work, such, in fact, as we conceive the one before us to be.

The present treatise is more particularly designed for students, and seems admirably adapted to their wants. It is highly practical; the author introduces nothing that does not strictly appertain to his subject, and avoids those long disquisitions on minor points that detract greatly from some of the more popular works on midwifery. It is written in a clear and perspicuous style, in which respect, as in the one just mentioned, it offers a remarkable contrast to the treatise of our countryman, the late Dr. Dewees. The latter, though one of great value, and of more authority, perhaps, than any other medical book ever issued from the press in this country, is certainly obnoxious on the score of style, and on account of the tiresome discussions into which it enters.

In the first portion of his work, Dr. Ramsbotham gives us the anatomy of the healthy and deformed pelvis, the shape and dimensions of the fœtal head at birth, the structure of the female generative organs, and the description of the gravid uterus. These subjects take up about 90 pages, and are illustrated by numerous lithographs. In his statement of the difference in form between the male and female pelvis, we notice an error, which, however, is a very common one. He describes the sacrum as being much straighter in the male than in the female skeleton, whereas the fact is directly the reverse, as may be seen by comparing the two together.

The remainder of the work is devoted to the subject of labor, which he divides, like Denman, into four classes: 1st. Natural, 2nd. Difficult. 3d. Preternatural, 4th. Complex; and under these various heads are discussed some of the most important questions that demand the attention of the physician or surgeon accoucheur.

The first class, or NATURAL LABOR, occupies about sixty pages, wherein the process is fully and minutely explained, being traced step by step from its commencement to its final termination, or the expulsion of the placenta, at the same time

that ample details are given touching its management, and also respecting the conduct and duties of the accoucheur during its progress and subsequent to its completion. All this is illustrated, wherever practicable, by beautiful and accurate engravings. We would dissent from but one thing in this portion of the treatise, and that is, the arrangement of head presentations into eight varieties; too much refinement in this respect always tends to defeat the very object for which it is proposed, and to perplex rather than enlighten the student.

The second class of labors, DIFFICULT OR LABORIOUS, embraces two orders, the *lingering* and *instrumental.* The causes of the former are discussed at length under two heads—those referable to the mother—and those in which the ovum is at fault. Instrumental labors, the second order, are subdivided, first, into those accomplished by instruments perfectly compatible with the life of the child, and the safety of the mother's structures; and, secondly, those in which either the child must be sacrificed, or a cutting operation performed on the mother's person. Under these two subdivisions, he treats of the forceps, both long and short, their application and the indications for their use; of the vectis, and the relative advantages of this instrument and the forceps; of craniotomy, the cases requiring it, and the instruments necessary to its performance; of the Cæsarian and Sigaultean operations; and lastly, of the induction of premature labor. He does not fail constantly to impress on the mind of the young practitioner that nothing short of the most urgent necessity will warrant him in taking an obstetric instrument in hand, and that in no case is such aid to be thought of, save as a last and only resort. As to forceps, he prefers the straight ones of Denman, and these he recommends to his junior brethren, at least in the commencement of their practice, in preference to those with Leveret's, or any other lateral curve.

In speaking of the induction of premature labor he notices a mode of practice, which, as it is of recent introduction, may be new to some of our readers. After describing the methods in use, he says:

"Being impressed with the great advantage of preserving the membranes whole, I made some experiments with a medicine (ergot) now well known, and found expulsive action soon follow its exhibition in all the instances, with very few exceptions, where I administered it.

After a great number of trials, however, I observed that, although the mothers recovered as well as if they had gone through an ordinary labor, their systems not being in any sensible degree injuriously affected by the drug, (and in some instances between thirty and forty doses were taken,) yet that the proportion of children born still was greater than when the membranes were punctured. This I attributed to the baneful influence of the medicine upon the fœtus. I was consequently led to modify the practice; and I am now in the habit of administering four or five doses at intervals of four or six hours, and of rupturing the membranes after their exhibition. I have generally remarked that the os uteri has become soft, and mostly somewhat opened under the action of the drug; and the increase of live births has been larger when this system was followed, than after any other which I have tried."

The third class, or PRETERNATURAL LABOR, likewise embraces two orders: first, those in which the breech or any part of the lower extremities presents; second, those in which the child offers itself transversely—*cross-births* properly so called. The various presentations, with the management they require, are carefully described, in the comprehension of which the student is greatly aided by the figures that accompany this portion of the work.

COMPLEX LABORS, the fourth and last class, comprise all not included in the former, and are divided into ten orders: 1st. labors complicated with hemorrhage; 2nd. with convulsions; 3d. with ruptured uterus; 4th. with lacerated vagina; 5th. with ruptured bladder; 6th. with syncope, independently of hemorrhage, or any extensive laceration or other lesion; 7th. with descent of the funis by the side of the head, or breech; 8th. with descent of the hand by the head or breech; 9th. labors in which monsters are produced; and 10th. in which there is a plurality of children.

The reader will not fail to observe that cases are here grouped

together, differing widely from each other in their nature, and requiring great diversity in their management. Yet, for purposes of instruction, this arrangement is perhaps as good as any other; a multiplication of classes would be both inconvenient and perplexing. In this part of the work, as throughout the whole, the principles and rules of action, such as they have been deduced from the largest experience, and sanctioned by the best authorities, are distinctly and clearly set forth.

We have thus given a hasty synopsis of the various subjects treated of in this volume, in lieu of a regular analysis of its contents, for which we have not space at present. We do not hesitate to recommend it—the book, we mean—to our readers, believing it to be, for elementary instruction at least, a most excellent one. To the student, such a work would seem indispensable; and we may be permitted to add, that if, with its lucid text, and admirable illustrations, he should fail to acquire a respectable knowledge of the principles and practice of obstetric medicine and surgery, he had better give up the attempt in despair. C.

Art. VI.—*The Practice of Medicine; or, a Treatise on Special Pathology and Therapeutics.* By Robley Dunglison, M. D., Professor of the Institutes of Medicine, &c., in Jefferson Medical College, Philadelphia; Lecturer on Clinical Medicine, and attending Physician at the Philadelphia Hospital, &c., &c. In two volumes, pp. 572—750. Philadelphia: Lea & Blanchard, 1842.

Professor Dunglison is certainly a man of the most prodigious industry, to say nothing of his talents, which are doubtless of a high order. The present treatise constitutes the seventh that has been furnished by his prolific pen within the last twelve or thirteen years. His first production, entitled "Commentaries on Diseases of the Stomach and Bowels of Chil-

dren," appeared in England in 1824, a short time before he emigrated from that country, of which he is a native, to the United States, to assume the duties of a teacher of medicine in the University of Virginia, to which he had been invited by President Jefferson, the distinguished founder of that excellent institution. Like the early efforts of Cooper and of Bulwer, the work in question fell still-born from the press; it was severely criticised by the reviewers, and no reprint of it has ever appeared in this country. All his other works, however, certainly the majority of them, have been well received by the profession, and one of them, "Human Physiology," has already reached the fourth edition. Scarcely forty-five years of age, he has published a greater number of works than any other physician on this side of the Atlantic, whether dead or living. To him writing seems to be no labor; books come to him almost at a call; he has only to say, "let there be a book, and a book there is." In addition to his various medical productions, Professor Dunglison has been editing for some time past a medical periodical, one of the most valuable, by the way, in the country, and has contributed some very learned articles to several of our literary reviews.

From the immense amount of labor, both intellectual and physical, which he has accomplished, one would suppose that the Professor was a thin, emaciated, Smike-like personage, or still worse, prematurely old and grey-headed, with a body bent like that of poor Scarron in the form of a Z. Not so, however. He is really a fine looking man, whose whole exterior is indicative of the most vigorous health, whose enbonpoint would do honor to an alderman, or even "my lord-mayor," who has none of that irritability which so much worries and frets the poet, especially those in high places—the garret and the attic, and whose social qualities are as rare as they are delightful. Notwithstanding his immense labor as an author, he possesses a sort of ubiquity truly remarkable. Go where you will in Philadelphia, you find the Professor. Does a stranger of distinction visit the city, he is the very first to call upon him; in the morning he is at the Blockley Hospital, or in

attendance on his private patients; in the afternoon he saunters forth in pursuit of health or recreation; in the evening he is at a party, or perhaps at the rooms of the American Philosophical Society, of which he is the corresponding secretary, and one of the most useful and active members. But when, asks the reader, does the Professor find time to compose his works? Not certainly in the morning, nor in the afternoon, nor yet early in the evening; no, these hours are all occupied in other pursuits; it is late at night, at midnight, if you please, when other men are wrapt in sleep and dreaming, *not of what they have done, but of what they intend to do,* that he produces those works which have made his name so honorably known in America and Europe, and so closely identified it with the history of medical science and literature in the nineteenth century.

Having said thus much about the *man*, we need not make any particular comments on his recent *production*, as our object merely is to attract to it the attention of the profession. Like its predecessors, it bears the impress of sound judgment, profound research, and extensive acquaintance with the labors of others in the same department. Next to the "Physiology," it is decidedly the best and most finished of his works. The arrangement is admirable, and the whole is executed in a manner highly honorable to the talents and learning of the distinguished author. If we mistake not, it will be extensively sought after by the profession, and adopted by many of our schools as a text-book. That it will supersede most of the treatises on medicine now in use among us, there can be no doubt. The mechanical execution is worthy of the matter; the paper and typography are excellent; and the *tout ensemble* is such as to induce the conviction that, in book-making at least, we are but a step in arrear of old England herself.

G.

Selections from American and Foreign Journals.

Lugol's Lecture on Scrofula.—The London Medical Gazette for October, contains reports of three lectures on scrofula, by Lugol, of St. Louis Hospital, Paris. These lectures present a very good view of the present state of knowledge on this important subject, and we believe that our readers will be pleased to possess an abstract of them. After noting the importance of the subject, from the frequency of scrofulous disease, Lugol remarks, "that so deeply does scrofula modify the whole organization, that persons afflicted with it may be considered as a *variety of the human race.* Not only is scrofula transmitted by scrofulous parents, but it will often affect all the children of a particular family when the parents fall into a particular state of health (not scrofulous); scrofula though presenting many varieties, is yet *one disease.* M. Lugol recognizes 5 forms—1st, tubercular—2nd, catarrhal—3d, cutaneous—4th, cellular—5th, osseous. Sometimes these forms appear separate; more frequently they are accumulated in the same person, two ore more of them.

1st. *Tubercular Scrofula.*—This is undoubtedly the most important form of scrofula; tubercles co-exist with all other forms of scrofula, they are the emblem of the disease—they are scrofula.

Tubercles are found in every region of the body, in every elementary tissue, in every organ, but wherever found, their anatomical and physical characteristics are the same.

Form.—They are round or ovoid, this is the primitive form, but it is often modified by their agglomeration; when not impeded in their development they always assume this form.

Volume.—In their origin very small, and even when fully developed not going beyond certain limits. These vary in different organs; in the lungs they never exceed the size of a

small pea; in the spleen they are larger, often the size of a bean. In the liver they are larger still, the size of a large olive; this is generally speaking the utmost size that tubercles attain; when they appear larger, it is often because several are agglutinated together. When situated in a region abounding in cellular matter, tubercles sometimes attain the size of an egg or an apricot. In parenchymatous organs they never attain this size.

Color.—Generally whitish grey, tinged with yellow, resembling the kernel of a horse.chestnut. The yellow becomes more decided as the tubercle softens. Modifications of the color are very rare. M. L. has seen them of a bright yellow; (qr. from *Jaundice?*) he has seen, though rarely, a mixture of tubercle and melanic matter.

Density.—This varies with the period of development; when of a size to be appreciated by the naked eye, they are hard and solid, forming the granules of Laennec and Bayle. Lugol thinks that this is not their first state, but that they follow the general law of organized bodies, and are fluid before they are solid.

Anatomical Structure.—Tubercles consist of a cyst or capsule, and a contained matter—tubercular matter. Anatomists have denied their vascularity and attempted to explain their growth by the juxtaposition of tubercular matter, secreted by the tissue in which the tubercle is lodged. Lugol thinks that this explanation does not account for the regular growth of the tubercle, and he also claims to have demonstrated the vascularity of these bodies; he says, that "when congestion or inflammation exists, their vascularity is often quite manifest; not only so, but their congestion may lead to rupture of the vessels, and effusion of blood in the substance of the tubercle," of which he communicated a very striking case, in 1828, to the Acad. des Sciences.

Tubercular Tumors.—These are constituted of the aggregation of many tubercles—sometimes the line of demarkation can be clearly made out on incising the tumor—sometimes it is quite lost, the mass appearing homogenous, and then again we meet with cases in which the wall of original separation gradually becomes less and less distinct, till finally it disappears altogether.

Seat of Tubercles.—Many pathologists insist that tubercles are always developed in lymphatic ganglia, while many, on the contrary, assert that tubercles are in fact only lymphatic glands, which have undergone the tuberculous degeneration. Some have even gone further and called tubercle *glanditis*,

thus asserting the inflammatory nature of a disease which only developes itself in persons of debilitated constitutions, and in which antiphlogistic means are most absolutely contra-indicated. Tubercles do not originate in any tissue or in any organ exclusively, nor are they the product of degeneration; every tissue is capable of becoming the matrix in which tubercle may be developed by the agency of those general and hitherto unknown laws to which their production is owing.

Once in being, tubercles go through different periods of development, like all other accidental tissues. Although found in every organ and in every tissue, tubercles are most frequent in parts abounding with cellular tissue, and in lymphatic glands; yet they are found in such parts as the brain, spinal cord, &c., in which no lymphatics have ever been demonstrated. It is in the cervical and inguinal regions, and in the thoracic and abdominal cavities, that tubercles are most common.

Sub-cutaneous Tubercles.—These are the most striking manifestations of the tubercular diathesis. In the cervical region, sub-cutaneous tubercles have long borne the name of scrofula or kings-evil; indeed with the older pathologists, scrofula meant only the cervical manifestation of tuberculization.—Even in our own day different names are given to tubercles, according to the region or organ in which they appear: mesenteric tubercles are tabes mesenterica—pulmonary tubercles, phthisis—tubercles beneath the skin are often called tumors. These have all been studied apart, and not as they should be, as mere chapters in the history of tubercular scrofula. Cervical tubercles scarcely ever exist alone, nearly always, not to say always, they are accompanied by tubercles in some region into which the eye cannot penetrate. They are usually small in very young children, and often stationary for a long time; about the end of the first or second septennary period, they increase in size and give rise to tubercular tumors. These may exist on one or both sides, but they are rarely equally developed on both sides. A remarkable fact is that these tumors, however large, do not interfere mechanically with the organs in the cervical regions. Mastication, respiration and deglutition are rarely affected, even by very large tuberculous tumors; this is important in diagnosticating them. Cervical tubercles are often suspended in branches from the mastoid process, sometimes they extend from that point to the chin, like a collar; they may occupy the sub-clavian hollow, descending beneath the clavicle, and forming a chain with the axillary or mediastinal tubercles. Sometimes they can be

traced along the course of nerves or vessels, with whose action they rarely interfere. These remarks equally apply to axillary and inguinal tubercles, which often co-exist with tubercles in other parts. Tubercles are found beneath the skin and sometimes extirpated, being mistaken for sebaceous tumors. This is always useless and often injurious.

Development of Tubercles in the Splanchnic cavities.—Tubercles are more frequently seen in the posterior than in the anterior mediastinum, and when they occupy both places, those posterior are largest and most developed. Their presence here generally coincides with their existence elsewhere. They rarely interfere with respiration or deglutition, even when the trachea or bronchia are surrounded by them. Now and then they contract intimate adhesion with the lungs and when they soften and suppurate, ulceration of the pulmonary tissue may ensue.

Tubercles are exceedingly frequent in the peritoneal region in children. In the adult, though frequent, they are rarely accompanied by those symptoms of marasmus, by which their existence in the child is attended. The presence of numerous tubercles in the mesentery is perfectly compatible with good general health. Mesenteric tubercles whether more or less developed, are nearly always perfectly distinct from the lymphatic vessels and ganglions; this explains the compatibility of their existence with a good state of general nutrition. They acquire here a very large size, larger than any where else. What is remarkable, they rarely cause ulceration of the parietes of the intestinal canal, the cœcum nearly alone seems capable of contracting adhesions with them; this is owing to the mobility of the other parts of the intestinal canal; the intestines get out of the way of the tumor as it grows.—*N. Y. Med. Gaz.*

Extract from a paper on the Treatment of Varicose Veins by the needle and twisted suture. By T. B. Peacock, Esq., late House Surgeon to the Chester Infirmary, &c.—I was first led to make trial of this plan from reading the report of a case by Mr. Melvin, in the number of the London Medical Gazette for July 7th, 1838, and I have since applied it myself, or seen it made use of by the surgeons to the Chester Infirmary, in at least thirty cases, of several of the most important of which I have retained notes. The plan adopted has been that recommended in the paper referred to, of passing a common

curved suture needle under the vein, constricting it with a thread in the figure-of-8 form, and having turned the needle on its side, retaining it there by straps of adhesive plaster: at the end of two or three days, the ligature, if only moderately tightened at first, will require to have a fresh one passed over it; and in two or three more the needle may be removed. Several different methods have been proposed for effecting the obliteration of the vein by the needle; but this, which was originally introduced by Velpeau, as being the most simple, is that which I have always adopted. The length of time which it will be necessary for the needle to remain will depend on whether it is intended simply to excite suppuration, or to ulcerate out; the last being the course which I have usually followed, as in one or two instances, in which the needle was withdrawn after exciting suppuration, the obliteration of the vein was found not to have been effected. This plan has, however, been objected to as leaving a sore difficult to heal afterwards; but in only one instance have I seen it attended by any such result. For the needle to ulcerate its way out, the time usually required will be from a week to ten days; but it will vary greatly according to the state of the part in which it is applied: in the immediate neighborhood of an ulcer, where the skin is thin and inflamed, a day or two will often suffice to commence the ulcerative action, and three or four for the needle to escape; while, when inserted some distance from the seat of the disease, and beneath sound integument, the process will require ten days, a fortnight, or even longer. Thus, in a case lately under my charge, where the needle was inserted beneath a tender sinus on the instep, leading to a small ulcer about an inch above, it ulcerated out in three days; while at the same time, in another case, a needle was placed under each saphæna, and one beneath the common vein, at their point of union; the needle on the anterior branch was not removed till the twelfth day, and the other two not till the nineteenth. I have since seen two instances in which the needles were retained till the end of the third week. Generally speaking, when inserted over a bone, they excite ulceration more rapidly than when upon soft parts; and I am inclined to think that, in the last situation, they are more apt to give rise to an undue degree of inflammation: at least, in the only two cases in which their application was followed by troublesome abscesses, they had been inserted beneath sinuses in the calf of the leg. Considerable pain is sometimes excited by the operation, but it usually soon subsides; and I have not, in any instance, known tenderness to extend in the course of the

vein above two or three inches from the point of constriction; and in none has it resisted ordinary treatment: indeed, in no instance which I have seen, have any serious symptoms resulted from the operation.

The cases in which I have found this treatment applied, have been in small irritable sores remaining after the bursting of large varicose sinuses, inveterate ulcers connected with a generally enlarged condition of the veins of the limb, and œdema of the leg and ankle, either simple or attended with a serous discharge from the skin; and in all of the cases but two in which I have seen it had recourse to, the results have been most satisfactory; and in these, as only one needle was inserted, and other sinuses were left unobliterated, success was hardly to be expected. The number of needles which I have generally seen inserted has been three or four in each limb, but, in some instances, five or six have been applied; the rule adopted having been generally to insert in a case of varicose ulcer one under each enlarged vein, an inch or so below the ulcer, and again on each trunk a few inches above it, selecting for the points of their insertion the largest sinuses. Sometimes I have adopted the plan mentioned by Mr. Dodd, of placing on each vein two needles an inch or an inch and a half apart, so as to effect adhesion of the sides of the intervening tract; and in these cases the main trunk will, after the cure is effected, be often found contracted to a firm cord up to the point at which the next large vein communicates with it; while, where a single needle only is inserted, the portion of the sinuses around is often not affected by the operation.

The effect produced on the sore by the obstruction to the course of the large veins in connection with it, is often most rapid; the inflamed margin gradually subsides, the edges become depressed, granulations spring up, and cicatrization quickly proceeds; and sores which have been liable to bleed entirely lose that tendency, the granulations becoming firm. I have, however, observed what has been noticed before by Mr. Dodd, that the healing process was not equally rapid throughout, the good effect produced by the needles sometimes gradually subsiding, and considerable difficulty being experienced in obtaining the entire healing of the sore.

In this way ulcers which had long been under treatment, without deriving any advantage, have, in several instances, been cured, and others which were found to return as soon as the patient resumed his work, have, by the aid of a laced stocking, been kept healed; indeed, not only does it appear to be a rapid method of effecting the cure of these cases, but I

am inclined to regard it also as a more permanent one. The first case in which I made trial of the practice was one of œdema of both legs, attended with excoriation of the skin, and a fœtid discharge, connected with a very varicose state of the large veins. The man, by trade a rope-maker, had been repeatedly under treatment before with very partial benefit; and no sooner did he resume work than the disease returned. On this occasion he had been subjected to the ordinary treatment during a month that he had resided in the infirmary, but with little or no advantage. Under these circumstances, as the case seemed to offer a fair opportunity for treatment with the needles, three were inserted beneath large sinuses in one leg, which was nearly well before the same plan was adopted in the other. He was discharged, entirely cured, on needles being introduced in the other limb, in six weeks from the commencement of the treatment. Two years have now elapsed, and he continues perfectly free from any return of his complaint.—Of two men one had suffered from varicose ulcers on both legs for nine years, the other for five; and both had been several times under treatment in neighboring infirmaries, but no sooner did they return to their work, that of cotton-spinning, than the ulcers again broke out. Seven needles were inserted in the legs of one, and three in the other, and both were cured, one in seven, the other in three weeks, and continued so for at least four months, during which I had an opportunity of noticing them. Indeed the absence of any pain, swelling, or weakness in the limbs, which they said, as healed before, they had always found to continue, and the sound appearance of the cicatrices, afforded a fair prospect of permanent cures having been effected. The state of the limb afterwards, and the pale, healthy-looking cicatrices, form a great contrast between cases treated by this and by the ordinary methods. I had a case recently under my charge, in which an ulcer, fully the size of the palm of the hand, was entirely cured in little more than a month, and this notwithstanding that copious suppuration was excited by the needles in the cellular membrane of the calf of the leg. This patient had previously been subjected to treatment for four months, with every advantage of circumstances for the cure of a sore in the same situation; and the case was further interesting as being attended by severe pain in the sole of the foot—an occurrence which was met with in one of Mr. Dodd's patients—and having been an old man of 70; while Bonnet, in an essay on this subject, published in Paris, has stated that the operation will not be successful after the age of 60, in consequence of the

indisposition of the blood to coagulate, and that it should not be attempted. I heard of the man several months after his discharge; he was following his work and his limb continued sound. I regret that, in consequence of most of the patients on whom the plan was tried in the infirmary residing at a distance, I am not able to speak of them after they left the institution.

The above remarks were written more than twelve months ago. I have now nothing further to add than that additional experience fully confirms the opinion expressed of the safety and rapidity of the cure of disease dependent on varicose veins, by the plan referred to, and I have reason to regard it as also a permanent one, care being of course taken to support the limb by a laced stocking or bandage, as otherwise the same cause which gave rise to the varicose condition of the veins will lead to the dilatation of fresh ones.—*Philadelphia Examiner*, from *London Med. Gaz., Nov.* 5, 1841.

Quackery and Humbug.—Inflammation.—The Medical Society of London held its first meeting for the session on the evening of September 27, 1841; Dr. Clutterback, president, in the chair. There was a very full attendance of members and visitors. In some preliminary observations, Dr. Clutterbuck took occasion to allude to several kinds of "quackery" and "humbug" which have lately prevailed, to a certain extent, in the profession. He particularly alluded to some new operations for defective vision, to operations for stammering, and to mesmerism. He classed the three together as being equally worthy of condemnation. He could not help expressing regret and surprise, that such proceedings as those should obtain even a transient notoriety in a profession so strictly one of fact as that of medicine. When, however, they did, unhappily for the public and the profession, succeed in obtaining dupes, then it was the duty of societies, like the Medical Society of London, to expose and condemn the fallacies. This was one great benefit which medical societies conferred upon the public.

After some further observations on the mode of conducting proceedings in the society, a paper was read from the pen of the president, entitled an "Attempt to show that most Diseases originate, directly or indirectly, in Inflammation." The paper was long and elaborate, and we can scarcely venture upon an abstract of it in the present Lancet. Suffice it to say,

that by a course of very ingenious reasoning, the author endeavored to show, that almost all diseases, except those which might be considered as merely symptoms, had their origin, more or less remotely, in that state which is denominated inflammation. This inflammation might be of such a character as to be at once recognized, or it might be so insidious as to destroy life, before its presence was detected. Happily, however, the practitioner had, most generally, sufficient evidence of its presence; for, although the four more ordinary signs of inflammation—heat, redness, swelling, and pain—were not to be detected in all cases of inflammation of the vital organs, still, when these were inflamed, there was such an exaltation of the vital properties, so general a febrile state, such an interference with the function of the organ, and such evidence of sympathy manifested by other and remote organs, that the diagnosis was rendered less difficult than it otherwise would be. The author proceeded to enumerate various diseases which originated or were accompanied by inflammation; and concluded by observing, that out of the one hundred and fifty genera enumerated in the nosology of Cullen, one-half of them were merely symptoms or varieties of disease, and not diseases themselves. Of the remaining genera, another half had their origin in inflammation.—*Medical Examiner*, from the *Lancet*.

Detection of Arsenic Acid. By M. Elsner.—It is well known that M. Runger discovers free sulphuric acid by covering a porcelain dish with a solution of one part of sugar and thirty parts of water, heating the dish by exposure to steam till it acquires the same heat, and then dropping on it the liquid supposed to contain the free sulphuric acid. A black color indicates the presence of this acid, because the greater number of other free acids do not decompose the sugar in this manner.

I have found that arsenic acid acts in a peculiar manner, producing on the porcelain coated with sugar a beautiful scarlet red color. The reaction is sensible with a liquid containing only $\frac{1}{1200}$ of arsenic acid. The action of the arsenic acid produces on the sugar ulmic acid, which brings the former acid to an inferior degree of oxydation.—*Journal of Franklin Institute*, from *Annal des Mines*.

Pulse of Children at the Breast.—M. Trousseau has inserted in the *Journ. des Connaissances, Med. Chirurg.* an interesting memoir on this subject. He gives first an abstract of what MM. Billard, Valleix, and others, have written on the pulse of infants at the breast. From them we find that before birth, and during pregnancy, the average of the pulse is 133 in the minute; that it falls to 83 at the moment the child is expelled; and that in some minutes after it rises to 160. In the course of the first day it falls again to 127, and continues gradually to diminish during the ten first days, its average being then from 87 to 90 per minute. The above numbers are only the average formed, as the variations of the pulse are very great in the new born infant. The following are the results which M. Trosseau has obtained. In infants from eight days to six months old, the average number of pulsations for boys was 131, and for girls 134; from six to twenty-one months, the average for boys was 113, and for girls 126, but along with the authors above cited, he found that the extremes were frequently far above or below the average.

The states of waking and sleeping have a much more sensible influence on the pulse than sex. M. Trousseau found that in infants from fifteen days to six months old, the average of the pulse was 140 during waking, and 121 during sleep; and in infants from six to twenty-one months, 128 during waking, and 112 during sleep; and this difference is still more marked when the child is afraid, cries, or struggles, when the physician is feeling its pulse. In these cases he has seen it rise from 112 to 160 and 180.

To sum up—the pulse of children at the breast varies from 100 to 150. After the first two months, it is a little more frequent in females than in males; and it is about twenty pulsations higher in a state of waking than it is during sleep.

The most important result of these researches is to show the impossibility of discovering a febrile state in infants, from the pulse alone.—*Am. Journ. Med. Sciences* from *Journ. de Med. et de Chirurg. Prat.*, Aug. 1841.

Fibrin, Albumen, Casein, as Elements of Nutrition. By Prof. Liebig.—These substances have this character in common, that they all comport themselves alike in regard to concentrated hydrochloric acid. They all dissolve in this acid with the aid of heat, and, kept for a time in a higher temperature, first assume a beautiful lilac, and then a rich violet

blue color. At this stage of the decomposition, each of the three substances reacts in the same way with carbonate of ammonia, and other reagents. Repeated analysis in the laboratory of Liebig, has in fact shown, that these three substances have the same elementary composition. The gases obtained by burning these substances with oxide of copper, consist in eight parts by volume of seven volumes of carbonic acid, and one volume azotic gas. The dried flesh of the ox, the deer, the cod and pike, and blood do not differ in composition. Extending our inquiries to the azotized articles of food consumed by phytivorous animals and man, vegetable fibrine (gluten), vegetable albumen, and vegetable casein (a substance which is contained abundantly in all oily seeds), we find that these substances have precisely the same composition as the equivalent animal proximate principles; they consist of eight volumes, seven volumes being carbonic acid, and one volume nitrogen. There is, therefore, absolutely no difference between the azotized elements of nutrition made use of by the phytivorous and the carnivorous tribes of animals.

But a large proportion of substances used as food by phytivorous animals—sugar, gum, starch—contain no azote, and cannot minister to the formation of muscles, nerve, &c.—what purpose do they serve in the economy? They are in the first place, by the loss of an atom or so of oxygen, converted into fat, and the question now comes to be, what is the object of the fat which we see so generally accumulated among animals? At every period of life, man and animals are exposed to ceaseless causes of decay, through the influence of the air of the atmosphere. With every breath, man parts with a portion of his body; in every moment of his life he produces a quantity of carbonic acid, the carbon of which must be replaced by that which is contained in the articles consumed as food.

Now, if we observe an animal or a man in circumstances in which he takes no food, in the state of disease when the body is not renewed, when it has not that restored to it from without, which it loses in the course of its own vital processes, we see that the fat immediately begins to disappear, that the body wastes. The fat, in fact, escapes through the skin and from the lungs, in the shape of carbonic acid and water; we find no trace of it either in the feces or the urine; it serves as the means of withstanding the influence of the atmosphere; it serves for the defence of the various organs. With the disappearance of the fat, however, the influence of the atmosphere does not cease; the other soluble parts of the body re-

place the fat, and yield their carbon in the struggle. At length all resistance ends, death ensues, and, putrefaction commencing, all the parts of the body enter into combination with the oxygen of the atmosphere. In the greater number of diseases that are called chronic, death follows through the influence of the atmosphere—through a want of resistance against the oxygen of the air. It is the carbon of the vital organs, of the nerves and cerebral mass in especial, that is expended in this direction. In the normal or healthy state, the carbon that is expended in the production of carbonic acid, must needs be derived from other sources.—*London and Edinburg Monthly Journal of Medical Science*, Nov. 1841, from *Ann. der Chemie und Pharmacie*, Aug. 1841.

On Milk.—At the meeting of the *Acad. of Sciences*, on the 6th June, M. Donne communicated some observations on milk. Before the researches of the author, it was generally believed that milk is acid on being drawn from the breast; but M. Donne proved that the fresh milk of the human female, and of the female ass, is alkaline; as for the milk of the cow some doubts still remained, because it is almost neutral, and has the curious property both of turning blue test-paper red, and of restoring the blue color of paper that has been reddened by an acid. Sometimes, indeed, cow's milk is acid; we then discover by the microscope, that the milk-globules, instead of floating separately in the fluid, (as is the case in healthy milks) are collected together in little masses, and it seems probable that this change depends on the commencing coagulation of the caseum. In a recent case where it was a matter of the utmost importance to obtain perfectly pure milk, the author found this alteration in the milk of a cow which had been selected for her healthy appearance. The milk was acid, and the globules agglomerated.

At the previous meeting M. Donne communicated the results of some experiments with milk, which he had performed on various animals. Milk of different qualities was injected into the vessels and great cavities of dogs, horses, goats, frogs, &c. Milk of good quality had no bad effect when mixed with the blood; while, on the contrary, unwholesome milk gave rise to various accidents and sometimes occasioned death. *Am. Jour. Med. Science*, from *Prov. Med. Jour.*, June 19, 1841.

A New Medical Journal in Boston.—It will be seen by an advertisement in to-day's Journal, that some preliminary efforts have been made with reference to the establishment of a quarterly Journal of Medical Science in this city, which, instead of exciting any alarm in regard to the effects it may produce on our own long cherished periodical, has our best wishes for its success. The gentlemen who are to be the editors, are competent to conduct its course with dignity and renown. Once or twice within the last few years, attempts have been made in this place to usher into existence a new medical periodical, but somehow they were smothered in embryo. The present enterprise, it is hoped, will succeed better. We never entertained an idea of monopoly in the way of Journalizing; the wonder is, how it happens that we have been, so many years, unmolested occupants of the field. Since there is room enough for more, and talent enough in this city and in New England to sustain half a dozen quarterlies, of the highest order, it only remains for the profession to contiuue their liberal patronage to the Boston Medical and Surgical Journal, and withal offer such pecuniary assistance as shall likewise place the contemplated quarterly on a firm foundation. Any facilities which we can offer through our own pages, towards forwarding the operations of the projectors, is cheerfully tendered to them.—*Boston Med. and Surg. Jour.*

Six Cases of Diarrhœa treated with Monesia. By Q. Gibbon, Salem, N. J.—Case 1st.—Mrs. K.—Married. Had labored under chronic diarrhœa accompanied with ulceration of the intestines for two years. Three or four months ago she was put upon small doses of acet. of morphia, which, after several weeks continuance, arrested the disease, and the patient remained for two months apparently perfectly well. At the expiration of this time the disease suddenly returned, and soon regained all its former activity. The extract of monesiæ was now commenced in doses of 5 grs. three times a day, and afterwards increased to 7 grs. four times per day, and continued for ten days, but without any other benefit than a slight decrease of the discharge for the first two days. The medicine was then discontinued, and the morphia substituted with its former success.

Case 2d.—A child of W. H., affected with diarrhœa of 18

months standing, had used anodynes, alteratives and astringents freely, but without permanent benefit. The ext. monesiæ given in doses of two grs., three times per day, assisted by the warm bath and frictions with flannel, checked the discharges in two days, and removed all traces of the disease in two weeks.

Case 3d.—J. M., aged 70—health delicate, had a diarrhœa, with short intermissions, for six months—had been treated with creta cum hydrarg. with but temporary relief. Took six grs. of monesia four times per day, from the 2d to the 10th of November, assisted by a few grains of pulv. doveri., occasionally, at bed time. The discharge ceased in two days, and upon the tenth he expressed himself perfectly well.

Case 4th.—Mrs. J.—Diarrhœa of four or five days continuance—slight fever, tormina, stools bloody and slimy. Had resorted to no previous treatment. Took 8 grs. of ext. mones. three times the first day, which checked the discharge, and allayed all unpleasant symptoms.

Case 5th.—A child of four years of age, affected with a bowel complaint which had commenced in the summer, and continued unchecked until November, though treated with a variety of astringents, and subjected to counter-irritation upon the abdomen. The monesia was given in doses of 2 grs. five times daily for six days, with the effect of gradually diminishing the discharges, changing their color and consistence, and creating a vigorous appetite, which the child had not previously enjoyed. Having no more of the remedy I was compelled to relinquish it. Dover's powder and flannel frictions were substituted, and I had the satisfaction of seeing my patient perfectly relieved in another week.

Case 6th.—In this case the remedy entirely failed as in the first case. It was one of diarrhœa supervening upon phthisis pulmonalis, and had been previously treated by creta cum opio., acet. of lead, acet. of morphia, and several of the vegetable astringents without benefit. The monesia was prescribed at first to the amount of 15 grs. and afterwards increased to 40 grs. per day, and persevered in for three weeks—when, as no abatement of the symptoms was perceived, the remedy was discontinued at the request of the patient.

Remarks.—That the above cases may be entitled to their just weight in the evidence now accumulating both for and against this new remedy, it may be well to state, that the few last doses taken by Mrs. K. in the first case, occasioned slight nausea accompanied by a slight burning in the stomach. With this exception, I have not witnessed any of the irritating

effects detailed by St. Ange. My doses, however, were not so large as he prescribed. The above cases lead me to infer that monesia is more astringent than tonic in its operation.—*Am. Med. Intelligencer.*

Kiestein as an evidence of Pregnancy. By H. Letheby, A. L. S.—In No. 11 of the Guy's Hospital Reports, there is a valuable paper upon this subject, by Dr. Bird, in which he enumerates many cases to prove the existence of this principle in the urine of pregnant women. Since the publication of that report I have had many opportunities of investigating the subject; and, as the result will show, it forms an important addition to the already known symptoms of pregnancy. The object of this paper, however, is not only in furtherance of its value as such a test, but to point out certain precautions to be observed in the experiments, in order to prevent fallacy.

The urine should be procured at a time when the woman is as free from disease as possible; and I believe that passed early in the morning, after rest, gives the least variable indications. This should be exposed, in a tall narrow glass to a continuous temperature of about 70° of F.; if a much lower temperature than this is used, say about 40°. I have known the urine stand for more than a fortnight without undergoing any change, although it be replete with kiestein or its principles, at a temperature of 70° However, if the woman be pregnant, we shall observe, in two or three days, the first indication of its presence, by the urine becoming turbid. In a day or two more a thin pellicle forms on its surface, and this gradually acquires consistence up to a fortnight from the onset of the experiment. But long before this time you will have noticed its characteristic odor; certainly not like cheese, to which Dr. Bird compares it, but precisely analogous to the smell of raw beef beginning to putrefy: it is emphatically a *putrid smell.* I have kept the urine more than a month after this, but it never loses either its pellicle or peculiar odor.

Besides the error likely to arise from the adoption of too low a temperature, where the kiestein would not be separated, I would warn the earlier experimenter not to fall into the opposite error of confounding the pellicle which forms upon all urine on standing, especially that which contains the lithates in excess; the more so as the general as well as microscopic appearance of this pellicle is often precisely like that of kiestein. The appearance I am now alluding to, however, is

never accompanied with the putrid animal odor; but, on the contrary, gives out a copious smell of ammonia, and when disturbed falls immediately to the bottom of the liquid. These are the two especial distinctions.

On the value of this test I shall be very brief:—Of the 30 cases examined by Dr. Bird, 27 gave the required indications of the presence of kiestein; the other 3 were at the same time suffering under febrile excitement. Dr. Bird could not detect it in the urine of unimpregnated women, or after parturition, and during suckling

In the American Medical Library, as quoted by the British and Foreign Medical Review for October last, is a report of the experiments of Drs. M'Pherters and Perry, the resident physicians at Philadelphia Hospital. These gentlemen found it in the urine of 24 out of 27 pregnant women. Of the three negative cases, two were not in health when experimented on; further, they could not detect it in the urine of 27 unimpregnated women.

In my own experiments, which have been made at all dates between the second and ninth month of utero-gestation, there was unquestionable evidence of kiestein in 48 out of 50 cases. I am unable to account for its absence in the two exceptions, for I took care at all times to have the urine as free from disorder as possible.

In 17 non-pregnant women there was no indication of its presence. In examining the urine of 10 women during the time of suckling, I found it in all immediately after delivery, but that the evidence of its existence fell off at a period between the second and six months.

A question now naturally arises as to the cause of the presence of this principle, and what is its composition? It appears easily accounted for on the known sympathy that exists between the uterus and the breasts; the latter of which, taking cognizance of the gravid condition of the uterus, prepares itself betimes for the proper performance of that function which by and by is to become its necessary duty. Certain principles analogous to those of milk being imperfectly secreted, may, in this nascent condition, become reabsorbed, because, as Dr. Bird suggests, they do not find a ready outlet, and getting into the blood, are excreted thence by the kidneys; and this habit of reabsorption may go on for some little time after the birth of the child.

The composition of kiestein is not so easily made out: examined by the microscope it consists at first of a multitude of globules, varying in size from the one thirty-two thousandth

to the one eight thousandth of an inch; after a time these break up, or coalesce and form flakes, and then crystals of triple phosphate generally become pretty abundant in it. This shows that the greasy appearance of the pellicle is not due, as Dr. Bird supposes, to the triple phosphate, for this is after formation; nor are these globules composed of fat, for they are perfectly insoluble in ether. I have not been able to detect them in the urine until it becomes turbid, so that they appear to be formed in the urine after expulsion. They are soluble in alkalies and in boiling acetic acid, and give all the reactions characteristic of coagulated albumen or fibrin: to these, then, they are most analogous; but nothing but an ultimate analysis can determine their identity or not. The globules do not differ in appearance from those contained in milk, but their complete insolubility in ether shows that they do differ.—*Am. Med. Intelligencer*, from *Lond. Med. Gaz.*

M. Dubois on the Auscultatory Signs of Pregnancy.—The uterine *souffle* is usually perceptible about the fourteenth or fifteenth week of pregnancy; the period at which it may be first heard, being no doubt dependent upon the amount of development of the uterus and its elevation above the os pubis. The point at which it is most frequently audible is towards the middle of the height of the uterus on its anterior or lateral (generally the left side) part. In this respect M. *Dubois* differs from M. *Naegele*, who states that the common situation of the uterine blowing sound is one of the inguinal regions, extending thence upwards. In most cases, the space over which it may be heard is limited to a circle of two or three inches in circumference. A curious circumstance connected with this sound is the occasional changeableness of its situation; on one day it is inaudible at a spot where it had been distinctly heard the day before, and *vice versa.*

Obstetrical auscultators should be aware of this fact; else they will be apt to be perplexed in some cases. We may mention likewise that the uterine *souffle* varies much at different times in its loudness and distinctness, being one day scarcely audible, and on the next, perhaps, very distinct.

That the development of this sound is somehow dependent upon the circulation of the blood through the uterus, appears from the fact that it is always much enfeebled, or even altogether suspended, by the contractions of the organ during parturition—a fact which abundantly proves that the sound can-

not proceed from the pressure of the gravid uterus on the iliac arteries, as some writers have alleged. The striking resemblance of the uterine *bruit* to that perceived in erectile tumors, and in aneurismal varices, confirms the above opinion. M. *Dubois* objects to the appellation of placentary or utero-placentary being applied to this blowing sound, for the reason that, although its locality most frequently corresponds with the attachment of the placenta, it continues to be audible for some time after the expulsion of this body, and in other cases after the death of the fœtus.

The other sound, that of the fœtal heart, is a still more decisive sign of pregnancy: the number of the pulsations varies, according to the experience of M. *Dubois*, from 135 to 150.* This tictac sound is usually most distinctly perceived on the anterior part of the abdomen somewhat to the left side: it is rarely audible before the completion of four, or four and a half months of pregnancy.—*Medico-Chir. Review, Jan.* 1842, *p.* 197.

Division of the Muscles of the Eye in certain cases of Blindness.—When the central portion of the cornea has become so opaque as to prevent the transmission of the rays of light through the pupil, remaining sound, we may displace the axis of the eye, by dividing one or more of its muscles, so as to induce a certain degree of squinting, and thus bring a transparent part of the cornea in the direct line of vision. Such an operation is much more simple, and greatly less hazardous, than any of the modes which have been proposed to form an artificial pupil.

M. Florent Cunier, a well known ophthalmic surgeon in Belgium, claims the merit of having first performed it.

A man, 25 years of age, presented himself on the 21st of June, at his ophthalmic institution, with a strabismus of the left eye, which had existed from infancy. When two years

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* It is a curious circumstance, that the late Dr. Hamilton, so long the professor of midwifery in the University of Edinburgh, most stoutly maintained that the pulse of the child in utero, and also after birth until breathing commenced, seldom exceeded 60 or 70 pulsations in the minute. In our notice of his last work, in the number of the Medico-Chirurgical Review for July 1836, we questioned the accuracy of the doctor's assertions, and incurred in consequence his wrathful criticism. Our readers may find it worth their while to revert to his pamphlet, and our rejoinder, in the number of this Review for January 1837.—*Rev.*

old, he had suffered from a purulent ophthalmia, which had caused the destruction of this eye, and had left on the cornea of the other a dense opacity, which covered nearly the outer two thirds of its surface; the inner third, which remained transparent, was almost quite concealed in the angle of the orbit, and was visible at those times only when the squint was made to cease. When this was done he could see near objects, by carrying them towards the nose, and then turning the eye as forcibly as possible outwardly. The anterior chamber of the cornea was normal, and the pupil was quite free, and readily contracted on exposure to light.

On the 30th of June I divided, says M. Cunier, the internal rectus muscle; and immediately the pupil occupied the centre of the orbit, and the squint vanished. The eye being, however, not sufficiently drawn outwardly to enable the patient to see objects conveniently, I denuded the sclerotic as far as the attachments of the superior and inferior recti, but without causing the slightest degree of squinting outwards. Founding my practice on the experiments made by myself and Mr. Duffin, I divided the inferior oblique muscle; this was no sooner done, than at once the eye was drawn outwards and somewhat upwards. The ecchymosed blood in the cutaneous wound was rapidly absorbed; but the healing of the conjunctival wound was rather tedious, in consequence of the very considerable retraction of the muco-serous membrane induced by the displacement of the eye-ball. Immediately after the operation, the patient was able to guide himself through my garden; and six days afterwards he came alone to my house.

He now sees so well that he can distinguish the smallest objects, when they are brought near his eye. What is remarkable is, that the pupil has become displaced in such a manner that it is now immediately opposite to the transparent portion of the cornea.

Case 2.—A middle-aged man, who had been blind for 12 years, was my second patient. The left eye was completely wasted; and only a part of the outer half of the right one remained transparent. By compressing the left eye, and turning the right one forcibly inwards, he could perceive the form of large objects. I divided the external rectus muscle, and denuded the sclerotic as far as the insertion of the superior and inferior recti; the eye was immediately drawn inwards so as to cause a squint in that direction, and I was gratified to find that the patient was able to see much more distinctly. Eight days afterwards, he could spread out in the market-place his wicker-baskets, which he made to earn a subsistence.

In the third case, in which the operation for forming an artificial pupil had previously been attempted, but without success, M. Cunier divided the external rectus; and, although the case was certainly a very unfavorable one, considerable improvement of the vision was effected.—*Gazette Medicale.*

Remarks.—This application of ocular myotomy is certainly one of the most ingenious and scientific that has been proposed. The operation for making an artificial pupil being always hazardous, and seldom successful, surgeons will gladly avail themselves of the practice suggested by their Belgian *confrere.—Medico-Chirurg. Rev., Jan.* 1842, *p.* 211.

State of the Urine during Pregnancy and Disease.—M. Donne read a paper to the Academy of Sciences at their meeting of the 31st May last, the object of which was to show that the urine of pregnant women generally furnishes certain characters by which the existence of pregnancy may be ascertained. From a great number of experiments, M. Donné has ascertained that the urine contains much less free acid, phosphate and sulphate of lime, in pregnant than in other women. This circumstance modifies in a very remarkable manner the microscopic crystals of the salts contained in the urine, and enables us to determine with great probability, if not absolute certainty, the existence of pregnancy. M. Donné has applied the method successfully in more than thirty cases, at different periods of utero-gestation.

The author has also examined the properties of the urine in various diseases. In chlorosis the results obtained have been positive and very striking. Healthy urine, as we all know, contains a certain quantity of iron. In chlorosis all trace of the metal disappears; but as soon as we begin to administer the preparations of iron, it is again found in the urine. According to M. Donné, we cannot consider the cure of chlorosis complete, unless the urine contains its regular proportion of iron, some time after we have ceased to administer the remedy. In certain affections which bear some resemblance to chlorosis, but should be distinguished from it, the author found that the urine contained a considerable quantity of iron.

In cases of pulmonary consumption, a very curious fact was noticed; when the urine is evaporated, instead of leaving the ordinary crystals, it gives rise to a thick, viscid matter, analogous to that extracted from diabetic urine. The author asks whether this be saccharine matter, or some animal substance.

and confesses his ignorance on the point; the fact, however is worthy of attention, especially since the observations of M. Rayer have established some analogy between diabetes and pulmonary consumption, by proving that the latter generally ensues on the apparent cure of the former. However, this appearance of the urine is so constant and remarkable that it will often enable us to diagnosticate the existence of phthisis, even without seeing the patient.

The microscopic crystals of the urine in cases of typhoid fever, are, in like manner, very peculiar. It is difficult to describe them in words, but they bear some resemblance to those obtained from the phosphate of ammonia. This kind of crystals is never seen in a state of health; while, on the other hand, the author has never seen them absent in typhoid fever, during many years that he has turned his attention to this subject. Typhoid fever, however, is not the only disease in which they exist; similar crystals are found in cases of pneumonia and acute rheumatism.—*Provincial Med. and Surg. Journal*, June 19, 1841.

Lapis Divinus in Otorrhœa. By Mr. Curtis, Surgeon at the London Royal Infirmary for Diseases of the Ear.—When visiting the hospitals of Prague, I found the lapis divinus in very general use in the treatment of otorrhœa, and I afterwards found it employed in a similar manner at Vienna, Munich, Berlin, Leipsic, and Hamburgh. At Prague I procured some of the lapis divinus, and the formula for its preparation; the latter is as follows:—Take sulphate of copper, nitrate of potass, and alum, of each sixteen parts—powder them separately, and then mix them well together; fuse them in a glass vessel in a sand bath, and add one part of powdered camphor; break the mass in pieces when cold. This formula is varied in different pharmacopœias, there not being quite so much of the principal ingredient, the sulphate of copper, in some, while others substitute the acetate for it: for my part I prefer the sulphate. On my return to this country I determined to give it a trial, and have experienced much advantage from its use, as the following cases will testify. I should state, however, that the preparation I employ consists of two drachms of the lapis divinus dissolved in an ounce of distilled water, a drachm of this solution being added to six ounces of rose or distilled water; this latter constituting the injection I recommend, and which I direct to be thrown into the meatus twice a day. I begin with a weak solution, in-

creasing the strength as I find it can be borne by the patient. Thus used, it does not cause any pain; it acts as a mild stimulant and astringent, and gradually produces a cessation of the discharge.

Case 1.—Mr. M., of Dublin, aged 50, has had a discharge from the left ear for sixteen years, attended with deafness, consequent on fever; on examination with Gruber's speculum and lamp, an ulcer was detected on the membrane of the tympanum, which membrane was perforated by it. The treatment just described was adopted; he came to me for about a month, during which time he improved materially; he afterwards pursued the same plan under my directions; the ulcer healed up, the discharge ceased, and a cure was effected, his hearing being at the same time restored.

Case 2.—Mrs. F., the widow of a clergyman, deaf seven years with the left ear, attended with a profuse, offensive discharge, tinged with blood, which she attributed to her having caught cold in her confinement. It was a singular and interesting fact in this case, that the discharge seemed to alternate or be vicarious with the catamenia, diminishing when they were present, increasing on their cessation. Inspection by Gruber's lamp and speculum showed on the membranum tympani a large ulcer with rough edges, and inclined to bleed. The edges were touched with a strong solution of the lapis divinus by means of a bougie passed into the ear, the meatus being protected by the shield of the speculum, which had been previously applied with that view. Under this treatment the ulcer improved, and a cure was gradually effected by means of a weak injection. The progress of the case was somewhat retarded by erysipelatous attacks affecting the auricle: an alterative plan of treatment was adopted in this case.

Case 3.—John Poverell, aged 15, a dispensary patient, has labored under a very offensive discharge from the ear, tinged with blood, and attended with partial deafness for three years the sequelæ of scarlet fever. The membrane of the tympanum was sound. The injection was used for three weeks, at the end of which time he was cured of the discharge, and had regained his hearing.

Case 4.—Mary Lowers, aged 37, a dispensary patient, has been quite deaf for ten years with otorrhœa and polypus, resulting from a cold, according to her account. The polypus was removed with the aid of the forceps, and the neck touch-

ed with a strong solution of lapis divinus, the meatus being protected by the shield of the speculum. Under this treatment, jointly with the use of the injection, the part healed, the discharge ceased, and the hearing was restored.

On Dislocation of the Crystalline Lens. By John Walker, Esq., Surgeon, Manchester, England.—A severe blow, or other injury inflicted on the eye, will sometimes cause a displacement of the lens. This may occur in three different directions; the lens may be thrown backwards into the substance of the vitreous humor, forwards into the anterior chamber, and sometimes forced through the sclerotic coat, when it will be found lying between it and the conjunctiva. Instances of each of these forms of displacement are not unfrequently met with. The lens may also be more partially displaced, either upwards, downwards, or laterally. Dislocation of the lens, however, is not always the result of injury. I have seen cases in which the crystalline had been protruded into the anterior chamber when no accident had occurred, and where the change had been, to all appearance, spontaneous. In one case, a young girl, under the care of my colleague, Mr. Windsor, both eyes were thus affected; the lens was seen lying in the anterior chamber, its transparency but little diminished, of a bright, gold-colored tinge, and very much resembling a lump of clear, almost colorless, jelly. In this instance, the pupils were dilated and immovable, considerable inflammation existed, and the usual concomitants, intolerance of light, pain in the organ, and impaired vision, symptoms which were apparently referable to the irritation caused by the displaced lens. The lenses were extracted, but the mischief engendered had been of too serious a character to be remedied, and the eyes remained perfectly amaurotic. Other instances of spontaneous dislocation are recorded; in some of these, the lens passed either in front or behind the pupil, according to the position of the head, and did not appear to excite much irritation.

It seems most probable that spontaneous dislocation of the lens can only result from a previous thinning or absorption of the capsule, although some of our best writers appear to think that when the lens retains its transparency the capsules remain entire, otherwise they presume that it would become opake, and be absorbed when in contact with the aqueous humor. This, however, does not seem a necessary result, ex-

cept the texture of the lens were also broken up, which, in cases of spontaneous dislocation, we should not expect it to be.

When the lens is protruded either into the anterior chamber or between the sclerotica and conjunctiva, it will usually be proper to remove it from its new position as early as possible, as it will otherwise be sure to excite inflammation, which may lead to a serious impairment of vision. Indeed, the injury which is sufficient to cause displacement of the lens will very often be productive of other important consequences, as concussion of the retina and severe inflammation of the globe. For the removal of a displaced lens from the anterior chamber, a small incision will alone be requisite; the opening need not extend to more than one-fourth of the circumference of the cornea, when, if it do not readily escape, the introduction of an iris-hook will effect its dislodgement. In one case of dislocation into the anterior chamber, the lens, after extraction, was found completely ossified; it had been several years in its unnatural position, and had either produced or was attended by amaurosis.

If the lens had been forced through the sclerotica, and remain under the conjunctiva, a small incision into the latter tunic will be sufficient for its removal. In one instance which came under my notice, and which was occasioned by a blow, the wound of the sclerotica, through which the lens had been protruded, was scarcely perceptible, the displaced body was easily removed, and was found quite softened and slightly opake; the nature of the case was indicated by the injury, and by the size, shape, and consistence of the foreign body under the conjunctiva, and confirmed on its removal.

If the lens be displaced into the posterior chamber, it had probably better not be interfered with, except it be opake, and its removal seem likely to cause a restoration of vision; but even then, it would be advisable merely to depress it, because the vitreous humor would most likely be disorganized.

It is worthy of remark, that the extraction of a displaced lens from the anterior chamber gave rise to the systematic extraction of cataract by incision of the cornea. Daviel, a French surgeon, took the hint from Petit, who, in 1708, punctured the cornea for the evacuation of a displaced and opake lens.—*N. Y. Lancet.*

Memoir of a Gentleman born blind and successfully operated on in the 18th year of his age. By Dr. Franz.—At the birth of this young gentleman (the son of a physician) the

eyes were found to present a twofold defect of organization. Both eyes were turned inwards to a great extent—and cataract existed in both. Towards the end of the second year, keratonyxis was performed on the *right* eye, which was followed by iritis and wasting of the eye-ball. Within the next four years, two similar operations were performed on the *left* eye, without any success, but with no destruction of the eye. The color of the opacity, at length, became of a clearer white and some faint perception of a strong light was experienced by the boy.

Into the long and minute description of the state of this gentleman's eyes in his 18th year (1840) we cannot go. It appeared that the *right* eye was completely amaurotic, and the *left*, which had become atrophied, was the only one considered fit for an operation. The following were the steps taken.

"On the 10th of July 1840, in the presence of Dr. Swaine and with the kind assistance of Messrs. F. Fowke and F. Steinhaeuser, I made an incision in the cornea upwards, and introducing a pair of fine curved forceps, armed with teeth, into the posterior chamber, I seized the anterior wall of the capsule by passing one of the blades of the forceps into its small aperture, and attempted, by pulling it slowly, to separate it from its adhesion with the uvea and its peripheral connection, in which I succeeded without producing a prolapsus of the vitreous body, or tearing the capsule, which I now removed. After this proceeding, a large piece of the lens of an opaque color, probably the nucleus, presented itself in the pupil, which was easily removed from the eye by means of Daviel's spoon; the pupillary aperture then appeared perfectly clear and black. The patient was now turned with his back to the light, for the purpose of trying a few experiments as to his sight, but from these I was obliged to desist on account of the pain which the light produced in the organ. Both eyes were then closed with narrow strips of court-plaster, and the patient carried to bed. Venesection, local bleeding, fomentations of iced water, continued without intermission for about forty-eight hours, together with the scrupulous observance of the most severe regimen, barely succeeded in keeping down the inflammation, the effects of which in this case, where but one eye offered hope, were much to be dreaded, if it should surpass that degree which was necessary for the healing of the wound in the cornea. This process went on and terminated so favorably, that the cicatrix, situated close to the sclerotica, is now scarcely visible. The patient suffered from muscæ volitantes and from a considerable intolerance of

light, pain being produced by even a mild degree of light falling on the closed lids. The muscæ volitantes were greatly mitigated, and the intolerance of light ceased after the lapse of a few weeks, by the use of proper pharmaceutical remedies, by local bleeding, change of air, &c., and the employment of the ophthalmic fountain of Professor Jungken, which I have fully described in the Medical Gazette, vol. xxvii, p. 444. To promote the development of the power of vision, the use of the fountain was continued twice daily, with Pyrmont water, and latterly with simple spring-water, for the space of three months, when it was discontinued, as it began to irritate the eye."

On opening the eye on the third day, he perceived a blaze of light, and all objects confused and in motion. He could not distinguish any object. The pain forced him quickly to close the eye. Gradual exposure of the eye to light habituated the organ to its stimulus; and when the vision became tolerably distinct, all objects appeared so near to him that he was afraid of coming in contact with them, so that he was constantly correcting the sense of sight by that of touch.

On the 21st of September, 1840, Dr. F. operated on both eyes for the congenital strabismus. The operation was so successful, that the gentleman's personal appearance was much improved. In November he was able to read the names over the shop windows, and to tell the time, to a minute, by the St. Paul's clock. The tide of human existence, however, in the streets, so confused and confounded him, that at last he could see nothing. By the spring of 1841, the sight was much improved—and improving. The case, altogether, is very creditable to Dr, Franz, as well as interesting to the profession and the public. The paper is published in the Philosophical Transactions for 1841, Part 1.—*Med. Chir. Rev.*

On the Injuries to Health occasioned by breathing Impure Air in close apartments.—The *Lancet* for June 19th, 1841, contains some remarks on this subject by Dr. Elmore, which we conceive to be of so much importance, that we shall transfer the greater part of them to our pages, and invite to them special attention. The entire neglect, for the most part, of all means for ventilation in our buildings, public as well as private, and the imperfect means adopted for the purpose in the few instances in which it has attracted some little consideration, is truly remarkable when it is considered that a constant

and duly regulated supply of atmospheric air is essential to the sustention and prolongation of life, and to mental enjoyment. Formerly our dwellings in Philadelphia were warmed (if so it might be called) by wood fires, the greater part of the heat from which was carried up the huge chimneys, and the currents of air thus necessarily created, were supplied by the crevices in the doors and windows. The consequence was, a general and just complaint by those who collected in front of the fire that their backs and feet were freezing whilst their faces were burning.

At present warming houses by means of heated air is becoming prevalent, and whilst ingenuity has been taxed for the means of effecting this with most economy, i. e. of heating the air to the highest temperature, the *quality* of this air and the means by which it is to pass off when rendered more impure than when received, seems not to have obtained a thought. The air is heated by *iron* stoves in chambers of masonry. These chambers are too small, and the air is conveyed through the building by flues also too small. Hence it is necessary in cold weather that the stove should be kept red hot in order to heat the air sufficiently to warm the house, and thus the air is rendered almost unfit for respiration when introduced in the rooms. No means being provided by which this air shall regularly pass off, it becomes confined, and much discomfort and many ill effects result from breathing this air, constantly becoming more and more impure. But Dr. Elmore has discussed this so fully, that we shall not dilate further on the subject, but content ourselves with quoting his observations.

A free admission of air, and a constant supply and free circulation of this element, "is as necessary for sustaining life as a given quantity for the combustion of the fuel we require to warm our apartments: our builders, nevertheless, only provide for the latter, as if the former, although the more important, was of minor consideration; or, that they conceived the chimney-draught sufficient for both purposes, when in reality it does not answer that for which it is principally intended; as by far the greater portion of the heat generated in our open fire-places is carried up the chimney, by sharp currents of air from occasional openings of doors, or such crevices as it may force its way through; being, moreover, frequently productive of serious bodily injuries, particularly to those of delicate frames; while it cannot be sufficient for the purposes of wholesome ventilation: this air being colder than that already in the room, is consequently of greater specific gravity, and must form a lower stratum, not unfrequently felt by those placed round the fire,

suffering from an undue proportion of heat at one side and of cold at the other.

"It should also be borne in mind that the openings of our fire-places being seldom more than three or four feet from the floor, the upper stratum of air which we breathe is neither removed nor purified by this under-current, and must, from being breathed over and over again, be productive of most prejudicial effects, and that the contamination of this atmosphere is considerably augmented at night by the combustion of lights. It has been ascertained that the quantity of air breathed by an ordinary-sized person is about two thousand cubic feet per hour; and that two mould candles consume as much of the oxygen of this air as a human being; and that the nitrogen and carbonic acid gas which remain are peculiarly inimical to animal life, and that when carried up by the currents occasioned by combustion and respiration, they form an upper stratum where they remain, and must be repeatedly inspired before they make their escape into the chimney, the only ventilating flue with which our houses are provided.

"It should also be observed, that the heat thus generated is in proportion to the quantity of oxygen abstracted from the atmosphere, which enters into combination with the carburetted hydrogen of the flame of candles, coal-gas, oil, or other inflammable matter, from which light is produced. That every cubic foot of carburetted hydrogen consumed, unites, on an average, with two cubic feet of oxygen, (that portion of the atmosphere required to support animal life,) and that the product of this combustion is about two and a half inches of water and one of carbonic acid gas, which, when inhaled in its pure state, proves instantly fatal; and the greater the proportion we inhale, in addition to the vapors evolved from the lungs and skin, the more pernicious the effect.

"Supposing, for example, that the perfect lighting of an ordinary-sized apartment requires fifteen cubic feet of carburetted hydrogen per hour, this would form about a pint and a half of water, and fifteen cubic feet of carbonic acid gas; for whenever carburetted hydrogen gas is burned with oxygen, or atmospheric air, these are the products of the combustion, whether the carburetted hydrogen is obtained from wax, tallow, oil, or coal. If, therefore, this lighting continues in an unventilated apartment for seven hours, one gallon of water is produced, the greater part of which will be deposited on the walls, windows, furniture, polished metal, or other cold surfaces, with which it comes in contact: and to some articles of this nature it is known to prove highly prejudicial, in addition to the in

jury to health occasioned by an increased quantity of moisture, mixed with the air we breathe. As one of the principal functions performed by this air for the preservation of health, is to carry off with it a considerable quantity of vapor, in order to prevent its undue accumulation in the lungs, it is, therefore, evident, that after it has been already so loaded it cannot properly perform these functions, and that consumption and other complaints are thus frequently induced.

"The prejudicial effects of carbonic acid gas (which is the same as the choke-damp of mines) as well as the nitrogen of the air, which is set free by the abstraction of the oxygen (and amounts in quantity to four times that of the oxygen), are well known, and ought by all possible means to be provided against. This has been attended to within the last few years in our public hospitals, and the mortality in consequence considerably decreased; and likewise in several of our manufactories and public establishments, where the diseases generated by the number of persons congregated in such establishments have been proportionably diminished. In the House of Commons, also, where hundreds of members, with hundreds of candles burning at night, tended so much to vitiate the atmosphere, important improvements in lighting, as well as ventilation, have been recently made; but in our domestic establishments little or no attention has been paid to this important subject, and the foundation of a variety of diseases must be the result, particularly from the foul air breathed at balls, or other crowded assemblies.

"The confinement of air in our churches and places of public worship must also be highly prejudicial, as we are frequently exposed to an atmosphere, on entering one of these edifices in the summer months, ten or fifteen degrees below that of the external air, independent of the stagnant state in which it has been allowed to remain during a whole week, often vitiated, in a greater degree, by the gaseous matter evolved from human remains; and even in private houses much inconvenience is experienced from the stagnant state of the atmosphere in close and gloomy weather, as the entire basis of ventilation depends on the possibility of producing a constant circulation as well as supply of this element. Close stoves are also objectionable, when made of iron, and heated to a certain temperature, as oxide of iron is produced by the powerful attraction of that metal for oxygen, and the formation of ammoniacal gas by the mixture of the nitrogen which remains, with hydrogen, acting on our bodies and olfactory nerves.

"But if stoves were constructed of masonry throughout, as in many other countries, or of fire-tiles, or porcelain plates, imbedded in mortar, with well-regulated flues, they would be far preferable to open fire-places; this substitution of imperfect conductors of heat being not only consistent with the soundest principles of economy in the preservation of heat, and its more uniform distribution through apartments, but more conducive to health than bringing the air in contact with iron stoves or pipes. Our desire, however, for polished metals in almost every department of our domestic appendages, united to the interests of the furnishing ironmongers, to whom these matters are usually left, must operate, in no small degree, in determining the prevailing taste for this commodity. Porcelain stoves may, nevertheless, be made sufficiently ornamental for those who prefer health to fashion; and when apartments are provided with well-regulated apertures and flues through their ceilings into the adjoining chimneys, to carry off the air vitiated by respiration and combustion, a sufficient degree of heat may be obtained with a sufficient supply of that element, without which it is impossible to maintain health.

"The healthy appearance of those who pass the greater part of their time in the open air, sufficiently indicate its advantages. Armies are also well known to have greater numbers on the sick list when well-housed, and what is considered comfortably settled in quarters, than when exposed in a campaign to the vicissitudes of the seasons for weeks and months, without any other covering than the canopy of heaven, or occasionally of a tent or hut, or the shade of a tree. These facts ought to satisfy us that we should admit the air as freely as possible, and provide, at the same time, for its escape through the ceilings of our apartments at all seasons of the year, as the temporary and often imaginary inconvenience of a little cold, when compared with the decided disadvantages of breathing impure air, is by far the lesser evil."—*Am. Jour. Med. Sci.*

Cases of Dislocation of the Clavicle backwards behind the Sternum. By M. Morel.—Case I. Lemoine, 17 years of age, was overtaken in a narrow street by a carriage, and had his right shoulder violently squeezed against the wall, in a direction forwards and inwards. He experienced at the time some pain at the bottom of the neck, and a great sensation of suffocation which lasted more than a quarter of an hour. The dyspnœa gradually subsided, but the motion of the right arm

not returning, he, on the 8th day after the accident, entered the *Charité*, when he was found in the following state:—The two shoulders were on the same level, but the right one was nearer the mesial line. The internal extremity of the clavicle was half concealed behind the sternum, and its upper part consequently formed a projection above the bone. When the shoulder was carried backwards the tumor became more prominent forwards. On depressing the shoulder, it rose, and disengaged itself from behind the sternum, and, by carrying the shoulder upwards, outwards, and backwards, the bone returned to its natural position; the hand could be carried to the head, by directing the elbow backwards, but if it was brought forwards, the attempt caused great pain. Desault's bandage was applied; but, as it slipped, it was replaced by that of Velpeau, which kept the bone completely in position. The patient was lost sight of on the 18th day, as he was obliged to be removed to another ward on account of the appearance of smallpox.

Case II.—Lamotte, 28 years of age, was shoeing a horse, when the animal made violent efforts to free his leg; endeavoring to restrain them, he fell, and met with a dislocation of his clavicle backwards. The next day he was in the following state:—The right shoulder was nearer by sixteen lines, than usual, to the mesial line; there was slight swelling of the external jugular vein; some pain was felt, but more towards the middle than the extremity of the clavicle, the external head of which had disappeared behind the sternum, where it was impossible to feel it. When the hand was carried to the head, there was pain if the elbow was moved forwards, but none if it was directed backwards. Two attempts at reduction made, the one by carrying the shoulder outwards and backwards, the other by acting on the arm in the same direction, were unsuccessful.

M. Lenoir made the patient be seated on a low chair; he then placed a sheet round his body, and fastened it to an iron bar. Two assistants pulled the arm and shoulder outwards and backwards, (almost horizontally in fact,) while another kept the wrist lowered, and at the same time turned towards the left side. M. Lenoir then placed his knee between the shoulders, and with one hand pulled the right one backwards, while with the other he traced the clavicle. Reduction was accomplished, and the bone was retained in its place by the shoulders being kept back by a bandage applied in the form of the figure 8. Another bandage was placed round the body, and kept the elbow close to the side. On the twelfth day this was removed and a sling had recourse to. On the eighteenth day he was

doing well. The reduction was so complete, that the extremity of the dislocated clavicle was more prominent than that of the other.

The first case put on record of this kind of dislocation, caused by violence, was published by M. Pellieux in 1834, in the Revue Médicale. Since then two other cases have been reported in the Gazette Médicale for 1836-37. Besides the two that we have given above, a third is quoted by the Gazette Médicale, from M. Morel's pamphlet; but we have not given it, as it appears to us not to be a case of dislocation backwards. In Sir A. Cooper's Lectures on Surgery, a case is mentioned, which was produced by deformity of the spine. The scapula was pushed forward, so that sufficient room was not left for the clavicle between that bone and the sternum, and its internal head gradually slipped behind the latter, pressing upon the œsophagus, and giving rise to great difficulty of swallowing. In this case, as reduction was impossible, the clavicle was sawn through, about an inch from the sternum, and dissected out. The operation was done by Mr. Davis, late of Bungay, in Suffolk. From the cases published, M. Morel says, that there are two kinds of this dislocation, viz. backwards and downwards, and backwards and upwards, as when a part of the inner head of the clavicle is above the level of the sternum. We can suppose that the latter species is consecutive, and produced by the action of the sterno-mastoid muscle, and by the weight of the superior extremity. The dislocation downwards is much more difficult than the other to reduce, and when reduction is effected, the bones are not so easily retained in their place.—*L. and E. Monthly Jour. Med. Sci.*, from *Gazette Médicale*, 21st Aug. 1841.

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EDITORIAL NOTICE.

Dr. Drake will spend the ensuing vacation in Cincinnati, and Dr. Yandell, at Murfreesboro', Tennessee. Correspondents of the Journal who reside near those places may direct their communications to either of those gentlemen: all others will please forward them to Dr. Colescott, Louisville.

MEDICAL CONVENTION OF OHIO.

We remind our readers in Ohio that the fifth annual meeting of this convention will be held, on the 16th of May, in the city of Cincinnati. We trust it will be well attended.

We thank our friend Dr. Dawson for a copy of the proceedings of the last Convention, lately received, and of which a notice will appear in our next number.

SCHOOL FOR THE BLIND IN LOUISVILLE.—PETTY MISREPRESENTATIONS.

In the *Boston Medical and Surgical Journal* for March the 2d, is the following paragraph from an anonymous Louisville letter, dated February 8th:

"We are just having a visit from Dr. Samuel G. Howe, the eminent superintendent of your Institution for the Blind. He is on a mission of benevolence, to establish a similar institution here. With four blind pupils he visited our Legislature at Frankfort, and there exhibited these redeemed children before the powers that be. The exhibition was satisfactory; the argument was convincing; and the General Assembly, with hardly a dissenting voice, voted to establish a school for the blind in Louisville, and granted ten thousand dollars to endow it, provided that this city would first raise the means to put it into operation. This would cost only about a thousand dollars, upon the plan proposed. We wanted no more of the State government. We can do the rest ourselves, and measures are now in train to obtain the preliminary funds here. Dr. Howe has exhibited these pupils here for several successive evenings, and demonstrated here, as well as at Frankfort, the practicability of educating the blind for usefulness and enjoyment. This matter is entirely new with us, and has excited great interest and drawn multitudes to the exhibitions; and without doubt, owing entirely to the benevolent energy of Dr. H., we shall soon have a small school in successful operation. It will be but a nucleus at first, to gather more funds and pupils. But we trust it will grow, so as to gather all the blind of the State within its folds."

Misstatements concerning the origin of public institutions should not be allowed to pass without correction. Under this sentiment we have extracted the foregoing, which displays, in a small way, more of systematic injustice than any corresponding number of lines which have lately fallen under our notice. In the beginning the writer endeavors to make the impression, that the "four blind pupils" were from Dr. Howe's school, when but *one* came with him from Boston, and the other three belong to the *Ohio Institution for the Blind*, where they have been exclusively taught (two of them being natives of that State), and whence they were sent by the Trustees of that school, in the care of its respected and enterprizing superintendent, Mr. Chapin, whose name is not mentioned. That gentleman, however, conducted two of the most interesting exhibitions made in Frankfort and Louisville, Dr. Howe not being present, at least in the latter. Again, the writer says "this matter is entirely new to us;" but what are the facts? They are these. In the winter preceding, 1840–41, a professor of the Medical Institute delivered once a week, in the Hall, a course of popular lectures on Physiology, and when he came to the sense of vision, devoted an evening to the method of instructing the blind. With the aid of Mr. Patton, a former pupil of the New England school, but at the time a resident of Louisville, the lecturer

made an exhibition of the mode of teaching the blind, in reading, writing, arithmetic and geography, and concluded with an urgent appeal to the audience, one of the most numerous and intelligent ever assembled in the city, in favor of the establishment, in this city, of an institution for their instruction in letters and the mechanic arts. When the lecture closed, W. F. Bullock Esq., a member of the Legislature, came forward and declared that he would agitate the subject in the General Assembly as soon as the session should open; and before his departure he called on the lecturer and got a variety of reports and documents, by the aid of which he framed a bill, and sustained it by an able and eloquent speech. Without difficulty it passed the house of which he was a member, but was laid over in the other. At the opening of the next, the last session, this bill was called up. Meanwhile a friend of Dr. Howe in this city had written to him, and requested him to visit Kentucky, which he benevolently did, and on his way out, asked from the Ohio school the aid which was so promptly granted. So much for the assertion "that this matter is entirely new with us."

Dr. Howe's benevolent labors for the blind have not been so few and feeble, that his friends need claim for him what belongs to others; nor have they been so extraordinary as to justify an exclusive mention of his name, to the careful suppression of the names of those with whom he may happen to be associated.

DISEASE OF THE TONGUE AND MOUTH.

Dr. James C. Harris, of Jefferson, Cherokee county, Alabama, in a letter to one of the Editors, dated January 19th, 1842, relates a very interesting case of disease of the tongue and mouth. He gives the following is the history of the patient:

"During the spring of 1836, Col. John Lowry, aged 64, a lawyer by profession, and then a resident of Talladiga, Alabama, had a most violent attack of bilious fever. In the course of the treatment, it was thought necessary by the physicians in attendance to administer calomel in large quantities; he accordingly took 50 or 60 grains at a dose, on several different days. Profuse salivation ensued, and recovery was slow. After this, he enjoyed a tolerable degree of health until the summer of 1840, when he was seized with an inflamed and ulcerated tongue, sore and swollen gums and lips, and a profuse flow of saliva. The fetor of the breath and other attendant symptoms resembled the effects of mercury so much, that the patient believed his

former ptyalism had returned, and so expressed himself, although he had not taken a particle of mercury, in any form whatever, since his attack of fever in 1836. Being then in the midst of a heated political contest, but little if any thing was done in the way of treatment until August. At that time, in addition to the affection of the mouth and fauces, Col. L. presented the following symptoms: skin sallow, particularly that of the face; pulse slightly accelerated; centre and base of the tongue covered with white fur; nausea, and slight derangement of the bowels, most generally of a dysenteric character, but occasionally the reverse. I supposed the condition of the tongue and mouth to depend upon a depraved state of the liver and chylopoietic organs, and accordingly prescribed a mercurial cathartic, which acted well, but excited an unusual and almost intolerable degree of nausea, that did not subside for several days. It was then repeated with nearly the same consequences, the nausea being if any thing augmented; the flow of saliva was also increased, and the intumescence of the tongue and adjacent glands was observed to be greater. Sulphur was now given in tea-spoonful doses, and a detergent wash applied to the mouth and throat. The local inflammation subsided to its former condition, at which it remained stationary for several months, when it gradually became worse, and again excited serious attention. The derangement of the bowels continued during all this period, having undergone no amelioration from the remedies employed.

I now directed a pill, containing two grains of calomel and one-fourth grain of opium, to be taken every night at bed-time. The first pill had the effect of lessening the number of alvine discharges; after the second, the bowels were still further improved, but the condition of the mouth was thought to be aggravated. Nevertheless a third was administered, which was followed by complete mercurialization. Recourse was again had to the sulphur and the detergent gargle previously mentioned, but with no better success than in the first instance, the condition of the mouth remaining much the same. Col. L.'s health was now so much impaired by the constant discharge of saliva, the nausea and loss of appetite, and the accompanying diarrhœa, as to prevent him almost entirely from attending to business. Subsequently, the intestinal derangement and the general health were somewhat improved by the use of the tinct. ferri muriat., but in other respects he remained the same. For the last few weeks the patient has been using the elixir vitriol, with decoction of sarsaparilla *ad libitum*, but without any apparent benefit."

Dr. Harris asks, in conclusion, if it is possible that his patient is laboring under ptyalism from mercury *taken four years previously?* if not, what form of disease must it be considered, and on what does it depend?

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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

MAY, 1842.

ART. I.—*Observations on the epidemic Yellow Fever of Natchez, and of the South-west.* By JOHN W. MONETTE, M. D., of Washington, Mississippi.

(*Continued.*)

EPIDEMIC YELLOW FEVER AS IT PREVAILED IN THE SOUTH-WEST IN THE SUMMER AND AUTUMN OF 1839.

As the summer and autumn of 1839 must constitute a memorable epoch in the history of this pestilence, not only in the West Indies but also in the southern portion of the United States, we propose to give a general sketch of the season, as well as of some other circumstances which have contributed much towards its unusual prevalence in this portion of our country. We believe that yellow fever never has prevailed epidemically, at the same time, in so many seaports and inland trading towns of the United States, as it did in the summer of 1839. Scarcely a southern port or trading town, hav-

ing direct commercial intercourse with the infected ports of the West Indies, or Mexico, escaped a visitation of epidemic yellow fever, more or less severe; and almost every inland town, having direct and unrestricted commercial intercourse with the *ports*, after they became infected, became successively infected also.

The first appearance of this disease in the United States, during this summer, was invariably in the maritime or commercial ports; and the first cases were invariably among the shipping in port, and especially among those which were direct from infected West India or Mexican ports. In every instance the disease for several weeks was confined exclusively to the shipping, before it began to spread among the resident population. This fact is abundantly established by the concurrent statements of the public press in all the infected ports. In no port of the United States was a single case of yellow fever seen, even on board the vessels, until after it had been prevailing with great mortality for several weeks in the West India and Mexican ports.

The yellow fever began to rage in the port of Havana and Vera Cruz, early in the month of May: other ports became likewise infected nearly about the same time, such as Matanzas, St. Jago and others. The disease in all these ports had become epidemic before the 1st of June. In Havana it had become epidemic on the 24th of May, and on the 28th of May several American captains and seamen had died of it in the port of Havana.* During the month of June it raged with unusual fatality, and the interments at that port for that month were 188.

It was late in August when the yellow fever began to decline; the Havana papers of August 10th state, that "the yellow fever is still very bad among the shipping." Ten days later, they state that "the sickness among the strangers has almost subsided for want of subjects."† "At Vera Cruz, it continued to rage with unabated violence," until the 16th day of October, "when there were more than 100 cases in the hospital."‡

*N. O. Bulletin. †Idem, Aug. 10th and following. ‡Idem for Sept. & Oct.

In Charleston S. C. yellow fever cases were known to be among the shipping from the West Indies early in June. On the 7th of June, Dr. Strobel, the port-physician, reported three cases of yellow fever on board the brig Burmah, five days from Havana. Two of them died the next day.* On the 10th, other cases were reported on board other vessels; on the 12th the Briganza arrived from Havana with several yellow fever cases on board. Other vessels continued to arrive at Charleston with other cases on board until the first week in July, when it began to spread rapidly among the vessels and produced much alarm. During the whole of this time the resident population was perfectly healthy, until about the 10th of July, when the disease began to spread among the people near the wharves; and in ten days afterwards it began to prevail over other parts of the city.

About this time a vessel from Havana with yellow fever on board arrived at the quarantine ground in New York. The vessel was not permitted to enter the port; and no disease was communicated to the residents of the city. A few days afterwards an infected vessel from Havana, arrived in Portland, Maine, after losing several of her crew on the voyage. Several deaths by yellow fever soon after occurred in that place in persons who had been on board this vessel while at the Portland wharf.†

In *New Orleans* vessels from Havana arrived almost daily during the season. About the last of June, several cases of yellow fever had occurred among the shipping from the West Indies. Towards the close of July cases of yellow fever among the shipping were more frequent, and by the 1st of August about 25 cases had been received into the Charity Hospital. The cases among the shipping increased rapidly in the first ten days of August, during which time the disease was gradually insinuating itself among the resident population, contiguous to the wharves and shipping. On the 12th it

*See his report— Charleston Mercury. †See Eastern Argus, Portland—also the Bulletin for July 26th, 1839.

was admitted to be epidemic in the city. From the first of August up to this time the number of admissions into the hospital varied from 8 to 15 daily.

Mobile, Savannah, and other ports trading with the West Indies, were successively infected in the order of their commercial importance; while not a single *inland* town was infected, or was known to contain a case of yellow fever, from New York to Louisiana. The whole interior country, including towns and villages, was remarkably healthy, and exempt from all the ordinary bilious diseases of the season. In no inland town did yellow fever make its appearance either in sporadic cases, or as an epidemic, until at least ten days after it had been epidemic in the nearest commercial port; and the order of its appearance in the towns on the Mississippi, was exactly in proportion to the amount of direct communication by steamboats, with New Orleans, after yellow fever was epidemic in that city. The same was true of the small towns around the northern shore of the Gulf of Mexico, from St. Joseph's and Tampa Bay to the Teche, and even to Galveston in Texas. The town of Augusta, in Georgia, in like manner became infected after the yellow fever became epidemic in Charleston and Savannah.

As we progress, we propose to trace the connection between the disease in the maritime ports and the West India ports; as well as between the disease in the former, and the interior towns dependent on them for commercial supplies.

Although we do not propose to throw much light upon the treatment of this intractable disease—this West India pestilence, which, in its worst form, derides the skill of the whole medical faculty, and all the discoveries of science; yet we propose to do what is far better. We propose to point out prudential measures and precautions, which will more effectually protect our commercial ports from the ravages of this disease, than all the improvements which have been introduced into the healing art for ages past;—the one to excel the other, as far as prevention excels cure.

Independently of any extrinsic cause, such as *imported in-*

fection, there was, during the summer of 1839, "a general atmospheric predisposition," operating over a wide extent of country, and which prepared the local atmosphere of towns and cities for the easy dissemination of yellow fever as an epidemic. This atmospheric predisposition is nothing more nor less than the "epidemic constitution" of Professor Caldwell of the Louisville Institute. This condition of the atmosphere does exist, as he very properly contends. The peculiarity of this constitution we shall endeavor to illustrate. It is that condition of the air, which appears to be peculiarly adapted to the production of yellow fever infection—a condition which exists sometimes from June to August in the middle and northern States, and from July to October in the southern states. It exists, in all probability, only at the times and places above designated; because there is no instance on record where yellow fever *assumed* its epidemic character in the United States, north of lat 40°, after August or before June; or in which it first assumed that character, south of 35°, before July or after the month of October.

This peculiarity, as we have already shown at large, consists, as we suppose, chiefly in a continued, hot, calm, and sultry condition of the general atmosphere; at which time, the air of cities and towns, being more confined than the common country air, and being respired by thousands of persons constantly for many days together, becomes thoroughly charged or contaminated by the effluvia thrown off by a population of healthy human beings. This condition of the local atmosphere adapts it to the dissemination of yellow-fever infection; and when a sufficient quantity of infected air from an infected town or city, is introduced into this local atmosphere, it assimilates the whole of the contaminated atmosphere, and thus infects a portion of a town or city. Several patients laboring under yellow fever, confined in a circumscribed portion of this air, at a high summer temperature, for several days, will impart to that portion of the local atmosphere certain properties, which will cause it, after being secluded from ventilation

for a few days longer, to assume the properties of the most virulent yellow-fever infection.

Upon these principles we think it demonstrable that yellow fever has been repeatedly, and may be again introduced from infected towns, into those which were previously perfectly healthy; and, consequently, that suitable precautions at the proper time may and will prevent a recurrence of such epidemic.

The state of the *weather* during the whole summer of 1839 was *extraordinary*, in all the southern portion of the United States. Even the month of April was uncommonly hot and dry. The same condition of the atmosphere continued to exist during the succeeding months of May, June, and July, with a few light and transient showers, the latter only south of lat. 31° in the lower valley of the Mississippi. From 31° to 34° north, the drought was excessive from May until late in October. The mercury in Fahrenheit ranged between 85° and 95° in the shade for about three hours after meridian; and at the coldest part of the nights between 75° and 80°. In towns and cities the reflected and radiated heat would increase the extreme temperature to 88° and 96° by day, and 78° to 83° by night. In the latitude of New Orleans, and within 50 miles of the Gulf of Mexico, the seabreeze reduced the temperature two or three degrees, as we ascertained by comparing Dr. Tooley's tables with those kept in the Charity hospital in New Orleans.

After the 10th of August the weather became still more dry and calm: showers ceased to refresh the air, even for a few minutes. The whole region between lat. 30° and 36° was literally parched with drought. Before the last of August the surface of the earth, to the depth of several feet, had become entirely deprived of all ordinary moisture; vegetation began to droop; creeks and small water-courses became entirely dry, or lower than they had been for many years; the cotton plant began to shed its leaves and forms; many forest trees likewise began to shed their leaves. The same condition of weather continued through the months of September and Octo-

ber: the earth was parched; grass, and small vegetation entirely withered and died, under the burning sun; the earth thrown up from the bottom of cistern-pits 14 feet deep, was as dry as dust; wells 60 feet deep, which had never been known to fail, became entirely dry; the cotton plant, in thin uplands, was as completely stript of leaves as if a killing frost had passed over it; the atmosphere continued hazy and smoky for nearly two months; many of the forest trees had shed half their leaves a month before frost; exhaustion and fatigue followed the most moderate exercise in man or beast; the sun beamed down intensely without the intervention of a cloud; large tracts of trees in Opelousas swamps entirely died.

During the months of September and October, the general atmosphere was unusually *calm* and *sultry;* not a breeze moved the stillness of the forest, by day or by night; the morning dews ceased to appear; the stars at night shone with peculiar brilliancy and twinkling. For weeks after the general air was agitated by gentle breezes, the smoke still lingered in the vallies.

This state of the weather existed from the northern limit of Georgia to the western part of Texas, through a zone of six degrees of latitude at least.

The following meteorological synopsis is made from the tables of Dr. Tooley of Natchez:

June.—This was one of the hottest months ever known in Natchez: extreme temperature in the shade from 90° to 96° for 21 days; intense unclouded sun; little or no wind, and only three or four light showers;—average temperature at 6 A. M., was 75°; at 12 M., 84°, and at 6 P. M., 88½; lowest point during nights from 70° to 80°.

July.—This month presented only a continuation of the same temperature, and general condition of the air.

August.—Same general state of weather; innumerable white cumulus clouds; intense sun; one light shower; no wind; average extreme temperature in shade, at 4 P. M., 88° to 90°, and for eight or ten days the mercury ranged from 90° to 94°—nights warm and sultry—not one breeze; last 15 nights between 65° and 70°.

September.—Temperature nearly the same, but more calm and sultry; air oppressive for violent exercise, hazy and smoky; three light showers; average extreme temperature by day 85° to 90°; lowest average temperature at night from 70° to 75°; no wind.

The following synopsis is taken from the meterological tables kept in the Charity hospital at New Orleans, where the reflected heat of the city exerts but little influence.

June.—Every day is noted as calm; only two light showers; four days are noted as cloudy; for the last 20 days the mercury ranged at noon from 80° to 86°

July.—First 20 days were moderately warm—extreme height of mercury ranging from 80° to 88°, at noon; during the last 10 days mercury ranged up between 82° and 88°; 23 days are noted as calm, and 10 of these as *foggy;* four days are noted cloudy with light showers; moderate wind on 6 days.

August.—This whole month was *calm*, *dry*, and *foggy;* every day is noted calm; yet at some hour of the day, before the 12th, there was some wind every day, with transient showers; on six days the mercury ranged as high as 90°; near the wharves it would have been 93° or 94°.

September.—This month is much as the last—calm, dry, and foggy; every day noted *calm*, 30 days; two light showers: breeze one day.

October continued the same, until the 10th, when a strong wind or gale swept along the coast south of lat. 31°.

Such was the general "atmospheric predisposition" to epidemic yellow-fever; and notwithstanding this strong "epidemic constitution," throughout all the south, the whole country, up to the actual introduction of yellow fever cases from the West Indies, was *more healthy than usual* at any season. Not a case of yellow fever was known either in town or country, until it had been prevailing to an alarming extent among the shipping in Charleston, New Orleans, Mobile, Savannah and other ports trading with the West Indies. Not the semblance of disease was seen in any point, until the "*seminarium*" and

the "*leaven of infection*" was introduced into a few principal trading maritime ports. Several weeks after these ports became infected, other towns became infected from them, as they had been from the West Indies.

The doctrine which distils a peculiar yellow-fever miasm from marshes, from putrescent animal or vegetable matters, from noisome vapors and noxious odors, exhaled from the surface of the earth, or from any combination of either of these supposed causes, must yield to the facts presented by the whole season of 1839, and by all the epidemics which appeared south of lat. 34°; for in no one instance did the concomitant circumstances accord with the prominent postulates of those theories. The general circumstances of the summer of 1839 are sufficient, we confidently believe, when duly considered by our most eminent medical men, to convince them that the doctrine of the domestic origin of yellow fever in the United States, is entirely unfounded in fact, and utterly confuted by all the facts presented in this epidemic prevalence of yellow fever; the facts themselves, if investigated, demolish the doctrine. Some of these we will notice as we progress.

In our examination of the facts, and in the arguments and legitimate deductions which we shall draw from them, we ask of our professional brethren a calm, patient, and impartial consideration. Our object is not to sustain a favorite theory, but to present the facts as they really exist, and to set them forth in their *true light*, so that those medical men, who, by a residence remote from yellow-fever regions, are precluded from personal observation, may have a fair opportunity to examine for themselves, whether the *whole matter has not been misrepresented* to them by most persons who have attempted to treat upon the cause of this pestilence in the United States. We know and readily admit, that the early doctrines instilled by our venerated professors, when we are upon the threshold of the temple of science, adhere to us with all the pertinacity and prejudice with which we would defend the religion of our fathers, right or wrong. Thus with the doctrine of local origin; having by a most unfortunate influence been adopted,

it is with great difficulty that any thing having an opposite tendency can have a reluctant examination. We do sincerely believe, that in relation to yellow fever in the United States, the medical faculty have had the subject presented to them in an *erroneous light*; and of no epidemics, more than those of Natchez. In the collection of facts relative to the introduction of the yellow fever into the southern ports and towns, we have derived our information from persons of intelligence and discrimination.

The great point to which all our facts and arguments tend, is to show that *yellow fever is a tropical disease*, peculiar to a few *tropical West India ports;* whence it is occasionally *imported*, in some form or other, into our maritime ports; and that from them it is subsequently *transported to other ports;* that it is *a commercial exotic*, temporarily transplanted upon our soil, *but not indigenous.*

It has been witnessed repeatedly, that during the strongest "epidemic constitution" as it is called, there has been no yellow fever in the United States, unless it has been prevailing to an alarming extent in Havana or some of the West India ports for many days previously. This has been exemplified repeatedly in Charleston, Mobile, and New Orleans. The same principle is confirmed at Natchez, which never has been visited with yellow fever, until *after many cases had been introduced from New Orleans.* Indeed as before remarked, this general hot, dry, and sultry condition of the air in the south is a *certain* and *infallible* indication of a healthy population—exclusive of imported infection.

We desire it to be remembered, that we do *not* advocate the *absolute and unconditional contagion*, or infection of yellow fever, and that it has the property of communicating itself from one individual to another, in a pure and free atmosphere; very far from it. But we do contend, that, under certain circumstances, independently of all local accumulations of city filth, the local atmosphere of towns or cities becomes so contaminated by a healthy population, that it becomes peculiarly adapted to the dissemination and spread of yellow fever, when

a portion of infected air is introduced. At some times a moderate quantity introduced will produce this effect; at other times, when the atmosphere is less prepared, a larger quantity is requisite.

We cannot admit, besides the general "epidemic constitution," which *rests equally over town and country*, that a mysterious *tothion* rests over a certain number of doomed points, while all others are exempt from this peculiar influence. In periods of epidemic visitation we find those towns only specially exempt, which by nature are cut off from direct intercourse with infected ports. This principle was exemplified in a most remarkable manner in the summer of 1839, in the lower regions of the Mississippi.

The pure atmosphere of maritime ports, such as New Orleans, Mobile, Charleston, and St. Augustine, is generally such, that yellow fever, when it is introduced, and becomes epidemic, is always far less malignant and fatal, than it is in inland towns, beyond the influence of the sea-breeze. Hence the disease in Natchez, Vicksburg, and Augusta, is more fatal than in the cities on the seaboard. On the same principle, it requires a much greater amount of imported infection, to bring on an epidemic in these cities than in the inland towns; hence the disease will prevail for weeks among the shipping in port, before it spreads among the resident population: but in the interior towns three or four infected steamboats, or a dozen yellow fever cases introduced, within ten days, with their bedding and cloths, will generally produce a sudden out-break of yellow fever as an epidemic. Besides, we always find that the epidemic ceases, in the maritime ports, sooner, and with a less degree of cold, than what is necessary to destroy the infection in inland towns; and in New Orleans and other maritime ports, the proportion of recoveries is much greater than in the inland towns, a large proportion of the cases being comparatively of a milder grade. The atmosphere of *interior towns becomes more contaminated*, and more stagnant, and produces a *more malignant grade of disease*, than the purer air near the seaboard.

In further tracing the origin and spread of yellow fever during the summer of 1839, we will first speak of its appearance and prevalence in New Orleans, and its extension from that city into the lower valley of the Mississippi.

We have already made reference to the fact that yellow fever cases were seen among the shipping in this port, as early as the month of June; and that cases continued to appear among the vessels during the whole of July and until the 12th of August, when it was spreading among the resident population near the wharves. On the 15th of August it was admitted to be epidemic in the city, and strangers were advised by the public authorities to leave the city. The disease spread with great violence over a large portion of the city, near the wharves. Cases multiplied rapidly. A number appeared near the canal basin, among the sailors, draymen, and laborers. Near the river wharves, where the principal shipping lay, the first victims were draymen, clerks, merchants, laborers, and others who were daily in the vicinity, or on board of infected vessels. The Charity hospital became crowded from the first of August until the close of the epidemic. The number of cases admitted into the hospital were as follows: viz., in August, 507; September, 361; October, 110; November, 87.

The report of cases in the Charity hospital is considered a good criterion of the prevalence of the disease, and is published for the information of the citizens. The greater part of the admissions into this institution, consists of seamen, foreigners, and destitute poor, who comprise two thirds of all the cases of fever in the city during the first month of its prevalence.

So soon as these reports corroborate the general impression of alarm, at the spread of the disease, all those who are able and willing, leave the city and seek some retreat among their friends in different towns in Louisiana and Mississippi, within 300 or 400 miles of New Orleans; some retire to the Bays of St. Louis and Biloxi, east of the city; some to the settlements on the Teche, Lafouche, in Oppelousas, and in the towns along the Mississippi as far as Natchez and Vicksburg.

The number of persons of all kinds who leave New Orleans suddenly, or within fifteen or twenty days after yellow fever is announced as epidemic, is seldom less than ten or fifteen thousand, and often not short of twenty thousand souls. Every steamboat is crowded; and every town on the river receives its proportion. Among them are great numbers of Irish and German emigrants, fresh from Europe, many of whom seek employment in the towns above.

As to the *cause* of the epidemic in *New Orleans*, we have already admitted a general "epidemic constitution of the air," such as prevailed over all the southern part of the United States and Texas. But this alone did not produce the disease in this city. Notwithstanding the frequent cases of yellow fever which had appeared among the shipping, as early as the last of June, and the great increase of those cases, during the whole month of July, the *population of the city*, resident and transient, never was more healthy *at any season of the year.* This fact gave assurance of an exemption from an epidemic to those who believe in the local causes to which yellow fever has often been erroneously traced. The public press congratulated the city upon the favorable prospects, and the *absence of local causes of disease.** On the 10th of August a change was admitted by the press, and on the 12th the existence of yellow fever as an epidemic was publicly avowed, and strangers were advised to leave the city.†

By a reference to the port-register of New Orleans it will be seen, that, during the month of July and the first ten days of August, in 1839, *more than twenty-five vessels* arrived in port from Havana, Vera Cruz and other infected West India ports. Most of these were small, such as brigs and schooners, and had left Havana and other ports after the 23d of June, the very time when yellow fever was most malignant in those ports.

We do not intend minutely to trace the introduction of yellow fever into New Orleans, but only to make a few general remarks on the subject of its introduction. It cannot be con-

*N. O. Bulletin, from Aug. 1st to 7th, 1839. †Bulletin, Aug. 12th.

tended by any one, certainly, that filth and such matters gave rise to this epidemic; for during the first week in August, as well as previously, the press was boasting, and justly too, of the unusual cleanliness of the city. Only a few days before the disease spread from the shipping to the resident population, the daily newspapers confidently predicted an exemption from disease, because of the absence of its usual sources, which they erroneously supposed to be putrescent matters about the wharves, and city filth. Another criterion upon which the prediction was based, was the extraordinary state of the health of the city generally.

But a few days showed the fallacy of that theory which attempts to trace epidemic yellow fever to city filth and other local causes. The disease which had been confined chiefly to the shipping, suddenly enlarged the sphere of its action, after a few days of hot, *calm and sultry* weather after the first of August.

We believe that independent of imported infection and cases of yellow fever, New Orleans is naturally as exempt from yellow-fever epidemics as any other port in the United States.

Yet when this city does become strongly infected, it becomes a source from which many other towns and cities on the lower Mississippi are liable to become likewise infected. If in our progress we give any good reasons to convince the reader that yellow fever may be, and has been transported from New Orleans to inland towns, we hope the converse of it may be admitted as true, viz:—that it may possibly have been imported into New Orleans.

We will pass on to the extension of the disease to many towns and villages on the Mississippi, and in the interior of Louisiana, during the summer and autumn of 1839. We think the facts will justify the inference, that in every instance where yellow fever appeared among the population of any of these towns, it was *the result of unrestricted intercourse with New Orleans*, after that city became strongly infected. The intercourse by means of which this disease was introduced

into the interior towns, is carried on chiefly through the agency of steamboats, which have been the principal means of extending that disease on the Mississippi above New Orleans.

During the summer and autumn of 1839, many of the towns and villages on the river within 400 miles of New Orleans, and also some towns on other streams in Louisiana, were visited by yellow fever within 20 or 30 days after it became epidemic in the city. In every instance where this occurred, the *first cases* of the disease were invariably traced to New Orleans; and *only such towns* as had free intercourse with the city by steamboat, were visited by the disease. Those towns which were cut off from such intercourse by nature or circumstances, invariably escaped the epidemic, although they might have double the population of others, and might be only half the direct distance from the city. The first individual cases, in any of these towns, were either persons landed from steamboats with the disease openly developed in their systems, or persons who had recently left New Orleans with the infection dormant in their systems when they landed, but which soon after was developed in its most malignant form.

The order in which the interior towns became infected, was that of the extent of their commerce and the frequency of steamboat intercourse with the city of New Orleans. Not a single town or village presented a case of yellow fever until 15 or 25 days after it had been fearfully epidemic in New Orleans. Yet all these inland towns had been exposed to the same "epidemic constitution" of the atmosphere, and even in a much higher degree, as we have already shown in our remarks on the weather. If some foreign agent or influence were not necessary, why did the epidemic visit New Orleans one month earlier than Natchez or Vicksburg?

Again we repeat that in no instance did a case of yellow fever occur, as a harbinger of an epidemic, in any of the interior towns, unless such case was clearly traceable to New Orleans infection. In every instance too, the disease began to spread first about the wharves and steamboat landings. Examine a map of Louisiana and Mississippi closely, and no one

town can be pointed out which was entirely cut off from communication with New Orleans, and which had any cases of yellow fever; even towns on tributary streams, which carry on a large commerce with the city in spring seasons, but which were cut off by low water in August and September, were as free from yellow fever as those which never had any such intercourse. On the other hand, *every town and village* on the Mississippi, and in the interior, within 300 or 400 miles, which had unrestricted commercial intercourse with New Orleans after the 20th of August, suffered more or less from epidemic yellow fever

As we have made frequent allusions to the agency of *steamboats* in spreading the disease on the lower Mississippi, it may be proper here to explain more particularly the manner in which this effect is produced.

The introduction of steamboats upon the Mississippi, has produced a new era in the commerce of this great valley. Formerly vessels from Havana and other ports, were often 10 and even 20 days in ascending the river to New Orleans, propelled by wind alone, against the strong current and the numerous bends of the river. Now they are towed from the Balize in less than 24 hours. But the greatest change has been effected in the commerce on the river *above* New Orleans.

Formerly the whole commerce down the river, was in flatboats, or floating arks; but few boats, comparatively, *ascended* the river, and these were barges and keel-boats, propelled by hand, at the tardy rate of eight or ten miles a day, and often less. A barge would be 30 days from New Orleans to Natchez; and one barge did not leave the city for the towns above, where twenty steamboats do now. Of course the ascending commerce of the city is a hundred fold more than it was before the introduction of steamboats. Scarcely a day elapses without the arrival of from one to five boats, ascending direct from New Orleans; and they continue their trips during the prevalence of the epidemic. The packets in the lower trade continue their trips regularly all the year, and make regular

landings at all the important landing-points above New Orleans.

These boats, after lying at the wharves for several days each trip, in the midst of the infected air of New Orleans, when the epidemic is prevailing, and after receiving their freight from the infected district, besides probably half a dozen cases of yellow fever in the meantime, at length become badly infected, and the entire atmosphere, in confined portions of the boat, becomes as thoroughly infected as the air of the infected district itself. A boat may thus contain an infected atmosphere, which may infect one or more persons at each village or landing where she touches, provided they go on board and remain a few minutes. In this manner persons visiting a boat may contract yellow fever with as much certainty as if they had visited the infected district of a city for an equal length of time. A steamboat is a large moving tavern, and may become as much infected as any stationary tavern or hotel in a city; and those boats which remain at the wharves of New Orleans for five or six days, discharging and receiving freight from the infected district, after the epidemic assumes its most malignant character, are fortunate if they do not become infected by the first or middle of September. At every town and village where the boats make a landing, there are scores of persons of all descriptions, who immediately rush on board where they remain until the boat is about to leave. If one, out of every ten, contracts the disease, the continual arrivals will soon infect twenty or thirty persons, who will probably sicken at different periods, from three to eight days afterwards. These may reside in opposite parts of the town, and each may be traced erroneously to some contiguous collection of animal or vegetable matter. Twenty or twenty-five cases thus contracted, in a strongly contaminated atmosphere, may be sufficient to produce a sudden outbreak of epidemic yellow fever.

Without multiplying examples, we will adduce the case of the steamboat Corsair, which left New Orleans in September 1839, for St. Louis, having on board at least 50 passengers of

all kinds, besides her crew. Soon after her departure many of them began to sicken with yellow fever daily, and one or two died every day during her trip. Before she arrived at St. Louis, this boat had buried fifteen of her passengers and crew at different points along the river bank. Others recovered, and many were still sick when she arrived at St. Louis. Most of these persons, no doubt, contracted the disease in New Orleans; but such a number of cases was sufficient to infect the boat, especially after receiving her freight from the infected district. Had this boat continued to run in the lower trade, in all probability, before November, she would have been instrumental in spreading yellow fever in many towns on the lower Mississippi. This is not an extreme case by any means in this region; and it is beyond doubt true, that *yellow fever was unknown in the towns above* New Orleans previous to the introduction of steamboats.

After New Orleans had become strongly infected, and the epidemic had been prevailing fatally for about two weeks, the disease began to make its first appearance at various points on the river above; and even on Red River, and the bayous south and east of Oppelousas. The points where it first appeared in this manner, were the towns and landing-places most intimately connected with New Orleans by steamboat navigation.

The following are the principal points on the Mississippi river above New Orleans; viz.

1. Donaldsonville,
2. Plaquemenes,
3. Port-Hudson,
4. Waterloo or Pointe Coupeé,
5. Bayou-Sara,
6. Fort-Adams,
7. Natchez,
8. Vicksburg.

Besides those places immediately upon the banks of the Mississippi river, there were the following towns and villages on Red River and the bayous of lower Louisiana; viz.,

1. Alexandria,
2. Natchitoches,
3. Oppelousas,
4. Thibodauxville.
5. New Iberia,
6. Franklin,
7. St. Martinsville.

The disease as it appeared in each of these towns, was clearly traced to New Orleans, for the first cases, during a week or ten days, and until it became epidemic, after having established a new centre of infection; which then produced an extension of the disease independent of any *additional importation.*

1. *Donaldsonville.* This town is situated on firm alluvial banks, on the west side of the Mississippi, and immediately below the efflux of the Lafourche, 85 miles above New Orleans. It is a beautiful and cleanly town, with a population of about 1000 souls. In high stages of the river, steamboats run regularly from New Orleans into the Lafourche, and to the whole settlement on that stream; but in low water, the outlet being dry, all freight and passengers for the Lafourche are landed at Donaldsonville; whence there is a short portage to the deep water in the bayou a mile or two below, where other boats receive them.

During the summer of 1839, Donaldsonville, like all other towns on the lower Mississippi, was remarkably healthy until the first of September, when yellow fever had been epidemic in New Orleans for more than two weeks. This state of health continued *uninterrupted*, until after ten or twelve cases of yellow fever had been introduced from New Orleans by the boats; besides a few persons who arrived from the city with the infection dormant in their systems, and soon after were attacked by fully developed yellow fever. These cases were all taken to the public hotel or to other houses in that vicinity, and near the steamboat landing. At length towards the middle of September, the local atmosphere was contaminated, or *infected;* and other persons, who had not been exposed to any other source of infection, contracted yellow fever and died, after having been more or less in the newly infected district. The remainder of the town continued healthy. Among the first persons attacked in Donaldsonville, after the first imported cases, were several persons who had visited, nursed, and sat up with the sick. The disease continued to spread slowly until frost, when about 30 deaths had

occurred besides the first imported cases. This statement is given upon the authority of Col. H. T. Williams, Surveyor General of Louisiana, and of Mrs. C. M. Thayer, both residents of that town. It will be remembered that Donaldsonville, during that period, was a regular depot for the trade of all the Lafourche country; and that passengers and freight were obliged to remain there from one to three days before reshipment. Not being a commercial town, it is destitute of wharves and other supposed sources of yellow-fever miasm.

2. *Plaquemines.* This is a small straggling village along the west bank of the river, just below the outlet of the Plaquemines bayou, 34 miles above the last. It contains a population of 25 or 30 families, besides a few stores and warehouses for the Plaquemine and Oppelousas trade. At low stages of the river it becomes a depot and carrying point for the trade; the outlet of the Plaquemines is dry at such times, and steamboats cannot pass through.

This village was entirely free from any disease until after several yellow fever patients had been landed by the boats from New Orleans; besides some few persons who sickened and died on their way to Oppelousas. A local air became infected; and the disease was thereby communicated to others who had not been exposed to any other source of infection. Twelve or fifteen persons died at this place of yellow fever.

We should have remarked before, that when any town becomes infected, or when a few cases of yellow fever make their appearance, the *mass of the inhabitants immediately desert the place;* and the cases which occur, as well as the deaths afterwards, are from among the remnant of population who decline leaving.

The next town on the river above is *Baton-Rouge*, on the east bank, upon high rolling ground, 140 miles above New Orleans, and 23 miles above Plaquemines. The population of this town is about 8 or 900. This is *not a trading town*, and no extensive settlements are near to make it a shipping point. The United States' Arsenal, State Penitentiary, and

other public buildings, give it all its importance. This town in 1839, like some others which we shall hereafter notice, *entirely escaped the epidemic yellow fever*, by a *quasi non*-intercourse with New Orleans, during the epidemic in that city. Besides the absence of a trading population, there is a shoal bar near the town, which prevents steamboats from landing in low-water; and further, the people, unbiassed by the interested policy of a *mercantile* community, and left to the deliberate convictions of their own judgments, refused to receive yellow-fever patients into their town. Their apprehensions had been thoroughly awakened to the danger of *imported* yellow fever, by an occurrence which was still fresh in the memories of many of them. I allude to the fact, that in the fatal autumn of 1829, a number of Spaniards, refugees from Mexico, had sought refuge from political dangers in New Orleans; but soon after their arrival, the yellow fever made its appearance in that city, and they were obliged to retire to a place of safety from disease. They took a steamboat for Baton-Rouge, after many of them had contracted the seeds of disease in the infected city. Soon after their arrival at Baton-Rouge, yellow fever made its appearance among them, and many of them perished. An infected atmosphere was generated, which communicated the disease to the resident population, among whom it prevailed with great mortality. For these facts I am indebted to D. P. Cain, Esq., of East Baton-Rouge parish.

This *non-intercourse*, and the *non-introduction* of yellow-fever patients into Baton-Rouge in 1839, is the only satisfactory reason *why this place escaped* during this fatal epidemic season; when every town and landing place below, and above, for 250 miles, with *uninterrupted intercourse*, were desolated by the pestilence.

3. *Port-Hudson.* This is a small village containing about 30 houses and 100 souls. It is situated on the east bank of the Mississippi, upon a firm clay bluff, about 35 feet above the river alluvion, and 25 miles above Baton-Rouge. It is the shipping point for an extensive back settlement, 25 or 30 miles distant. A rail-road from Jackson, La., intersects the

river at this point, which also contributes to render it an important steamboat landing. During the month of September, the yellow fever was introduced among the merchants, clerks, and laborers, and about fifteen of them died. Others from the country contracted the disease.

4. *Waterloo.* This is an important landing-place for the rich settlements on Fausse Riviere, of Pointe Coupeé. It is five miles above Port-Hudson, and is situated on the west bank of the river. The commercial intercourse between this place and New Orleans was *uninterrupted;* and besides the usual steamboat communication, during the epidemic in the city, a number of the French inhabitants, believing they possessed a constitutional immunity against the disease, made a visit to New Orleans in the midst of the epidemic. After a few days of pleasure and dissipation in the city, they returned; and several of these were soon attacked with yellow fever and died. An infected atmosphere was generated, and several others, who were not exposed to any *other* source of infection, sickened and died. The whole number of deaths at this place was about 15. I derive this information from D. P. Cain, Esq.

5. *Bayou-Sara.* This is a very important shipping point, on the east bank of the Mississippi, about 6 miles above the last village. The East Feliciana rail-road terminates at this point. The principal town, St. Francisville, is nearly a mile from the river, on high rolling ground; while Bayou Sara is situated on the immediate bank of the river, and is properly the landing, or shipping point for the town, and an extensive settlement for 50 miles back.

When yellow fever became epidemic in New Orleans, many persons came to Bayou Sara, and the vicinity, as a retreat from disease; others arrived at intervals subsequently; and the regular packets, besides the boats in the upper trade, continued their trips as usual during the epidemic, until many cases of yellow fever were introduced, as at other points. An infected district was produced near the steamboat landing, and the disease finally spread among the resident population; it was

also communicated to some from the country, who had not been exposed to any other source of infection. About 20 persons died in this town and its vicinity. This place, as well as St. Francisville, was remarkably healthy until after cases of yellow fever were introduced from New Orleans.

6. *Fort-Adams.* This town is situated on the immediate bank of the river, on the east side, at the foot of a high hill or bluff, many of the houses being crowded up the side of the hill. It is 75 miles above Bayou-Sara: it is a town of considerable trade for the back country, and is a shipping point for steamboats. The population is about 300. The yellow fever was introduced into this town in the same way that it was introduced into Bayou Sara and other towns below. It assumed an epidemic form late in September, and about 20 deaths occurred before it was checked by frost.

7. *Natchez* is the next in order. This city is nearly 300 miles above New Orleans, on the east side of the river. It is situated chiefly upon high ground, nearly 200 feet above the river; a portion at the immediate landing for steamboats and flatboats, is at the base of the bluff, along a narrow strip of alluvium, about 50 yards wide, and 600 yards in length. This portion of the city contains about 50 or 60 houses, including several large warehouses, stores, and hotels, with a resident population of nearly 200. It has always been the point first infected with yellow-fever, with one exception, which is easily explained. The disease always makes its first appearance among the clerks, shop-keepers, laborers and others, who reside upon the wharves or frequent the steamboats during the summer season.

Before we proceed to speak further of the epidemic of 1839 in Natchez, we will take occasion here to remark, that the beautiful *village of Vidalia half a mile distant on the opposite side of the river, has never been known to be visited by yellow fever*, even when it has been raging fearfully in Natchez. It has always continued healthy although Natchez, on the opposite bank, was perfectly desolated by that disease. The situation, as regards local causes, is in no wise different from

Donaldsonville, Plaquemines, and Waterloo, except that Vidalia *is not* a trading town; steamboats are scarcely ever known to make a landing there. Natchez, immediately opposite, is the port; and Vidalia has no more intercourse direct with New Orleans by steamboat, than if it were ten miles from the river. Hence, we infer that *Vidalia owes its exemption solely to non-intercourse* with New Orleans by steamboats. Even in 1839, when the "epidemic constitution" of the atmosphere was universal in this latitude, Vidalia was perfectly healthy. Why this peculiar exemption? The only valid reason to be assigned is, that the *indispensable requisite* is absent —the *leaven of imported infection*, which is introduced by steamboats. Vidalia is in the midst of an extensive alluvion, and as much exposed to marsh miasm as New Orleans itself, and far more than Natchez.

In regard to the state of the weather at Natchez in 1839, we have already shown that it was excessively *warm*, *dry*, and *sultry*, with a smoky or hazy atmosphere. During the last 15 days of August, the mercury ranged as high as 90° and 91° each day, in the shade; and there was but little change from that during the whole month of September. Even the month of October was characterized by continued hot, sultry weather, with the mercury ranging almost as high.

Natchez never was more healthy than during the last 30 days preceding the epidemic of 1839. Without fear of contradiction, I might say there was no city in the United States, of the same population, more healthy than Natchez was, until after the introduction of yellow-fever cases, and constant steamboat intercourse with New Orleans for nearly 30 days after yellow fever had been epidemic in that city. The whole country was alike healthy; *not a case of bilious fever was known;* even the negroes who toiled in the sun, on the hills of Mississippi, and in the swamps of Louisiana, were alike free from the usual diseases of the season. At such a time as this, our citizens were daily exposed to imported infection, for nearly 30 days after yellow fever had been epidemic in New Orleans. During that time, scarcely a day elapsed,

without the arrival of one or more steamboats crowded with people returning to the north, besides scores of Irish and German emigrants direct from New Orleans with their bundles of filthy clothes and beds, and occasionally one or two open cases of yellow fever to be sent ashore to the hospital. More or less of these foreign emigrants were left by each ascending boat, and often with the seeds of disease dormant in their systems and ready to be developed in a few days in the midst of a healthy population; steaming infection from the close and crowded huts and cellars in which they were compelled to seek shelter. Before the 20th of September there had been twenty deaths in the hospital, chiefly from among this class, and from the sick taken off the boats. Besides these, there were several persons residing in Natchez who had imprudently visited New Orleans, and who were attacked soon after their return.

Such was the state of things in Natchez for more than three weeks before the epidemic broke forth in its fury. Under these circumstances, and with the daily importation of large quantities of blankets and woollen goods for the planters, all from the infected district of New Orleans, could any one reasonably expect *less than an epidemic yellow fever*? Southern people, who are unbiassed by interest, know too well the character and habits of this disease to plead ignorance on the subject. If, knowingly, they permit their better judgment to be influenced by a class of interested merchants, and suffer pestilence to be imported and spread among the helpless and innocent population, the innocent and the guilty must suffer together. But the municipal authorities must answer to God and their fellow citizens for the untimely deaths of hundreds of helpless poor, and many valuable citizens.

After many cases of yellow fever had been introduced and others had occurred, there seemed suddenly to be two principal centres of infection in the upper part of the city. These were the City Hotel, and the Railroad Hotel, both within fifty yards of the west end of Main street. The former was the resort of American strangers generally; the latter, in like man-

ner, was the resort of the German emigrants, of whom there were many in the city. Each of these hotels were more or less crowded with strangers, daily arriving from New Orleans.

Yet in these houses and vicinity, an infected air was not produced until late in September, after the disease had prevailed near the steamboat landing for nearly two weeks, and several persons had died at the hotels.

Here we would remind the reader that in 1837, the first principal focus or centre of infection in the upper city was a German tavern on the corner of State and Commerce streets, which at that time was the principal resort of the German strangers. This custom was transferred to the Railroad Hotel in 1839, when the former was discontinued. In 1839 that portion of the city near the corner of State and Commerce streets was almost exempt from the disease; while in 1837, there being no such house as the Railroad Hotel, that point was comparatively exempt from the disease.

It was not until the 22d of September, 1839, that the disease began to spread rapidly near the steamboat landing; immediately after which a large portion of the population fled to the surrounding country for protection, and by the 28th the population of the city was reduced to 800 or 900 souls. The epidemic raged with great malignity until the middle of November, when 235 persons had died, viz:—69 in September, 135 in October, and 31 in November. Three practising physicians died, and three recovered after the most severe attacks. The whole number of cases was about 500.

The advocates of its local origin from city filth and putrescent matters, or from decaying vegetables, or miasm, were compelled to abandon that ground as *untenable* in the present epidemic. The facts relative to the beginning and spread of this epidemic, made hundreds of proselytes to the doctrine of imported infection, which could never have been effected by human reasoning.

Such had been the reliance upon a cleanly condition of the city, as an infallible guarantee of health, and as security against an epidemic, that the municipal authorities, in accor-

dance with these views, had caused the whole city to be thoroughly cleansed and spread with lime as a preventive. So effectually had this been accomplished, that the advocates of the local origin confidently predicted an exemption from an epidemic visitation, and derided the very mention of the word *quarantine.* The malignant epidemic which soon after broke out, convinced them that *something besides city filth, and the like, could* produce epidemic yellow fever.

It may be inquired, why is Natchez so frequently visited by yellow fever, when Vicksburg and other towns above Natchez have frequently been exempt? The reason is clear and unequivocal to my mind. Natchez is about 300 miles above New Orleans, a run of 36 or 40 hours for ordinary boats. It is the first port of entry, and by far the most important commercial point between New Orleans and St. Louis. It is the only point in this whole distance where a public hospital is prepared for the reception of sick and indigent boatmen, and yellow-fever patients from the ascending boats. Scarcely a boat from New Orleans passes Natchez without making a landing, at all seasons, and especially during an incipient epidemic in New Orleans, to discharge the numerous passengers and emigrants flying from the disease, as well as to relieve themselves of the sick who may be on board, either among the cabin or deck passengers. Hence every boat ascending to St. Louis, or the Ohio, is sure to make the *first principal landing at Natchez,* and the packets frequently make it the termination of their upward trips. Every boat making such a landing at Natchez, has no occasion to stop again at Vicksburg, or the intermediate towns; because her principal passengers, not bound for the upper country, *as well as all her sick,* are discharged at Natchez. Before other cases of disease are developed, the boat is in a colder region, or far above Vicksburg. In such cases, it is common for the boats to stand out in the river, at Vicksburg, for a few minutes, until the yawl only is sent ashore.

Hence, when the hospital at Natchez, (*which is within the city*) is kept open for the reception of yellow fever patients,

it *serves as a lure* to attract infected boats to her wharves, and *invite pestilence among her own citizens.* This very policy often protects the towns above and below, while it exposes her own citizens to the horrors of a malignant epidemic.

The converse of this has been clearly proven in two epidemics—those of 1839 and 1841. In 1839, Vicksburg, the next important town above Natchez, continued free from yellow fever until after Natchez had become so thoroughly infected and desolate, by the 10th of October, that the upward-bound boats ceased to make landings there, and passed on to Vicksburg, 110 miles above, as their first principal landing above New Orleans. What was the result? *In fifteen days from that time, yellow fever was epidemic at Vicksburg*, in all the lower part of the city near the steamboat landing. Again, in 1841 Natchez closed her hospital and established a quarantine as soon as yellow fever was epidemic in New Orleans. What was the consequence? The first principal landing for upward-bound boats was at Vicksburg, which continued healthy up to that time, but was visited *with a most malignant epidemic* within twenty days after the Natchez quarantine was enforced; while Natchez, thus protected, continued perfectly healthy during the whole time the epidemic was raging on both sides of her.

Here I will cite another argument somewhat analogous, in relation to the protection of *Washington*, six miles east of Natchez. We have already, in the early part of these observations, spoken of the malignant epidemic which was introduced into Washington from Natchez in 1825. In 1839 all parties agree fully in the "epidemic constitution" of the general atmosphere on the lower Mississippi; this existed in Washington, no less than in Natchez. Such was the state of things when the people of Natchez fled at the first alarm of yellow fever in 1839. Washington was one of the principal retreats; and the town authorities, having the scenes of 1825 full in their minds, had watched with anxious solicitude the reckless policy of Natchez, and the gradual introduction of yellow fever into the city, and determined to protect their

own citizens. On the 15th of September, when the disease was making its gradual advances in Natchez near the wharves, the selectmen of Washington passed an ordinance *prohibiting the introduction* of all feather-beds, bedding, blankets, and other porous articles, from Natchez, after the 18th of September, believing that the disease would then be epidemic in that city. Yellow-fever patients were expressly prohibited from entering the town. The ordinance was rigidly enforced, and the whole town, with its crowded population, was entirely protected from the threatened pestilence, although about eight cases of disease developed itself in those who came out from Natchez apparently healthy. Every one in the slightest degree acquainted with the habits and approaches of this epidemic, were fully satisfied that it only required the *spark* to ignite the pestilential influence. At that time Dr. Samuel Hogg, formerly of Nashville, expressed to me his extreme fear that the crowded state of Washington would lead to an outbreak of yellow fever. But the whole population continued as healthy as usual, protected, as all admitted, by the "quarantine" as it was called. Those who had witnessed the epidemic of 1825, concurred in the opinion, that the general atmosphere in 1839 was better adapted to spread an epidemic than in 1825. In 1825 the intercourse with Natchez was *unrestricted;* daily supplies of goods, woollens and negro blankets, were received by the merchants. A malignant epidemic followed in 1825, and in 1839 all continued healthy.

8. *Vicksburg.* This is a port of entry on the east side of the Mississippi, about 400 miles above New Orleans. It is situated upon the side of a steep hill, or bluff upland, facing the river, and upon a strip of alluvion at the base of the bluff, about 50 yards wide, and half a mile in length. The latter is crowded with stores, warehouses, produce-stores, and numerous small shops, up to the immediate bank of the river, near the steamboat landing. The population is about 4000 souls.

This city, during the most fatal epidemics which have desolated Natchez, *has always been exempt until* 1839, when only a partial epidemic, which was checked by frost, had

commenced. The importance of Vicksburg, as a port and shipping point for steamboats, has been increasing for the last few years; and in 1839 the railroad leading to Jackson was put into operation. This at the time drew a great many Irish laborers to the place when the yellow fever drove them from Natchez; and since the completion of the railroad, the commercial as well as the travelling intercourse has been augmented.

In 1839 this city continued as healthy as any city in the south until about the 10th of October. At that time the lower part of the city, at the foot of the bluff, began to be very sickly, and several deaths occurred every day, until the last of the month, when there had been as many as seven deaths per day for a part of the time. None could deny that some malignant disease was daily sweeping off its victims; but as none of the medical faculty of Vicksburg, although equal as a body to any in the Union, had ever seen yellow fever, and did not apprehend any such thing, from the cleanly state of the city, they concurred generally in calling it *congestive fever*. It continued its ravages until checked by frost early in November. By that time, at least 50 persons of all kinds had fallen victims to it; of these deaths about 30 occurred in the vicinity of the steamboat landing and many others near the railroad depot, among the Irish shanties. In the latter place an infected atmosphere was generated, which communicated the disease to those who had not been otherwise exposed.

This disease was, most *unquestionably, yellow fever*. Its symptoms, general character, and issue, have been detailed to me, and places it, in my mind, beyond a doubt. Dr. Hicks, who practised in the midst of it, towards the last of October, assured me that it was genuine yellow fever, with genuine *black vomit*. This peculiar characteristic of the disease cannot be mistaken by any physician who has once seen and examined it. Since the close of the epidemic of 1841 in this city, I have conversed with several of the physicians of Vicksburg, who had become familiar with *yellow* fever, and they were free to admit, that the fever of 1839 was genuine yellow fever. Many cases of

yellow fever in the first stages assume such an insidious aspect, that our most discriminating *teachers of medicine*, who have not been familiar with it, would be greatly deceived in their diagnosis, and mortified in their prognosis. Even in the advanced stage, there are cases where one not familiar with it, would pronounce a patient *convalescent* when he was *moribund*.

The first cases of this disease at Vicksburg in 1839, were brought there by steamboats; some were cases openly developed, and others were persons with the seeds of disease in their systems, but apparently in perfect health. An infected atmosphere was created near the steamboat landing, and near the railroad depot, which was gradually extending itself when it was neutralised by frost.

It is a material circumstance in this epidemic, that the city was *unusually healthy* for nearly three weeks after the epidemic had been raging in Natchez, and the first cases were certainly imported. And, had they been imported early in September, the epidemic would have matured before frost, and would have swept off five times the number it did.

How was it in 1841? Natchez established a quarantine; all the boats, with their refugee emigrants, and *yellow-fever patients*, or those with the seeds of disease dormant in their systems, were carried on to Vicksburg, and soon they spread yellow fever *there*, as they *would have done*, and as they *had often done before*, in Natchez. In twenty days, or by the 20th of September, they succeeded in producing epidemic yellow fever in Vicksburg, and it raged with great malignity until the first of November. Hence the first regular epidemic in Vicksburg occurred while Natchez, protected by a quarantine, escaped entirely.

The same principle was exemplified and illustrated, in the case of other towns, and especially Grand Gulf. This town in 1839 permitted free intercourse with all ascending boats which chose to land, and freely admitted the sick, and others. The consequence was that there were about 20 deaths from yellow fever, and the disease was assuming an epidemic form,

by generating an infected atmosphere, just as it was arrested by frost. The appearance of these cases in Grand Gulf was simultaneous with those in Vicksburg, and occurred only after boats ceased to land at Natchez. But in 1841, the case was altered. The people of Grand Gulf, encouraged by the example of Natchez, prohibited intercourse with infected boats, and utterly refused to permit yellow-fever patients to be set ashore within the town. Several of the regular packets desired to send some of their crews or engineers ashore for medical aid; but it was resisted by the people. Only two cases of yellow fever occurred in Grand Gulf in 1841, and they were in persons who had arrived from New Orleans, apparently in perfect health, but with the infection dormant in their systems. Grand Gulf continued as healthy as any town on the river.

Our attention will be next called to a brief notice of the disease as it prevailed in the towns on Red River, and upon the bayous west of the Mississippi and south of Red River; and also, incidentally, to its appearance along the northern shore of the Gulf of Mexico, and in Charleston, S. C., and Augusta, Georgia.

(TO BE CONTINUED.)

ART. II.—*Cesarean Operation terminating fatally.* By JOHN TRAVIS, M. D., of Carroll county, Tennessee.

In February, 1837, I was called to Mrs. P——, a corpulent lady, the mother of seven children, and wife of E. P——, of Carroll county, Tennessee. Her full period of utero-gestation had arrived, and she had been in charge of a midwife 48 hours, suffering the most excruciating pains of labor, without any beneficial effects. On examination I found that the os uteri had not dilated, nor was it susceptible of dilatation. It is true there was an aperture the size of a dime, but this could

not be enlarged by any possible effort of nature. I learned that the midwife who delivered her of her last child, had, to use the language of my informant, *torn her to pieces.* The uterus had been ruptured, the bladder injured, and the vagina and its appendages so lacerated, that her life was saved with great difficulty, and her health was only restored after being in the charge of a physician and good nurse for five months. She could not retain her urine, it passed off by drops, keeping her linen constantly wet. In fact she had been ruined by the midwife, and from a careful examination it appeared extraordinary that she became pregnant after having sustained so serious an injury. The patient herself expressed astonishment at the event, as penetration could be effected only to a very small extent.

Having never performed the Cesarean operation, and knowing its fatal tendency, I was unwilling to attempt it alone, and sent for Dr. Moore, then of Huntingdon, to assist me. On his arrival he made an examination, and ascertained that there was no chance to deliver the child without an operation, but expressed his unwillingness to undertake it, and informed the patient, as I had done previous to his arrival, that such operations had generally failed; that in England nine cases out of ten proved fatal, &c. But she urged us to operate, saying that she would have it done if she was certain that death would supervene while she was under the knife. She said her sufferings had become insupportable, and her friends likewise urged us to operate.

Being thus importuned, we finally determined to perform the operation, knowing that the life of the child might be preserved, and that there was a remote probability of saving the life of the mother.

The woman was now placed on a narrow bed, on her back, and everything being ready, I made an incision in the abdominal teguments with the scalpel, from the umbilicus, to within an inch of the symphisis pubes; then the linea alba was divided, next the peritoneum, and finally the uterus. The child being removed, the wound was closed with sutures, adhesive

strips, &c. The patient said she was easy, and that she did not suffer much pain from the operation.

She was put under a rigid antiphlogistic treatment, and for four or five days appeared to be doing very well. The lochial discharge passed as after a common delivery. About this period, in spite of our entreaties, she sat up and walked about in the house. On the sixth or seventh day she complained of a burning in her stomach and abdomen, vomited incessantly, had high fever, and died on the eighth day. Her child is a fine boy and is still living.

In connection with this case, I cannot help remarking that it is a matter of sincere regret, that there is no statute to prohibit ignorant women from the practice of midwifery. The necessity of the operation just mentioned, was, no doubt, caused by the ignorance and rashness of a midwife in a former pregnancy. I have lately seen another woman who was delivered of a child ten years ago, and she was injured like Mrs. P. She has had no catamenial discharge for ten years, nor any intercourse with her husband.

January, 1842.

Bibliographical Notices.

Art. IV.—*Report on the Establishment of an Asylum for the Insane, made to the Legislature of Indiana, during the Session of* 1841–2.

At the late session of the Legislature of Indiana, a communication from Drs. John Evans and Isaac Fisher of Fountain County, on the subject of establishing a Lunatic Asylum, was presented and referred to the Committee on Education. Mr. Ritchey, for that committee, on the 25th of January, made a very valuable and favorable report on this matter, and eloquently urged the establishment of a State Asylum for the reception and cure of lunatics. The necessities and sufferings of this class are clearly set forth, and the advantages of such an institution to the public are plainly related in that document. In Indiana, according to the late national census, there were in 1840 one hundred and thirty-eight lunatics and idiots supported at the public cost, and four hundred and twenty-four at private charge; and the labor and service of the whole of these five hundred and sixty-two persons were lost to their families and to the State, besides the expense of maintaining them.

What proportion of these, already insane, may be restored, can only be determined by personal examination, or tested by the experiment of hospital treatment. This, however, is cer-

tain, that most cases of short standing—a year or less—may be cured: and on the other hand, that most of those whose disorder is older, cannot be cured—but yet, that even the incurable can generally be improved. It is also certain, that of all that may hereafter become insane, about nine tenths may be restored to health, usefulness, and enjoyment; and their friends and the State thereby be spared the expense of maintaining them, and also gain the advantage of their labor, and counsel, if they are properly treated. Whether the public and individuals of Indiana shall be at the expense of maintaining their insane for life, in uncured lunacy, or shall maintain them for only a few months, and then enjoy the advantage of their strength and intelligence—this is and must be the pecuniary question for the people of that State. But the pecuniary view of the matter is the least important; the health, comfort, and happiness of its citizens are of far more value to society, than their bodily service. This report, after speaking of what has been done in other States for public charities, tells the people how little has been done in Indiana.

"Your Committee cannot refrain from expressing their deep and pungent regret, that, while almost every other charitable enterprise has been undertaken and pushed forward with a zeal, perseverance and energy truly commendable, this most charitable and benevolent of all the enterprises which the spirit of philanthropy, or even Christianity, has ever recommended, should be so long neglected and postponed by the good people of our beloved State. While we have been legislating for the "*relief*" of one class after another, we have been *deaf* to the shrill and piercing cries of the maniac. While we have been spending millions upon millions upon a system of internal improvements which has involved the State in interminable difficulties, not one cent has yet been appropriated towards the establishment of asylums for the deaf and dumb, the blind, or the still more unfortunate class who have been deprived of their reason."

"While Indiana has been thus shamefully squandering her resources on works, which are likely to be viewed only as monuments of her *folly*, and neglecting to build up those institutions which the cause of humanity should have erected, as monuments of far nobler character, our own suffering fel-

low citizens have been knocking for admission into the charitable institutions of our sister States, and knocking in vain."*

In view of the arguments offered in this report, and of the facts which late investigations have developed, relative to the prevalence of insanity every where, and of its curability, in proper institutions, we are led to wonder that the Legislature of Indiana could have hesitated to adopt the advice of their committee, and to believe, that nothing but the inevitable necessities of these times of pecuniary embarrassment, could have postponed the establishment of a Lunatic Asylum in that State. But we may hope that the convictions of the people will demand, and their finances permit the accomplishment of this desirable and humane object in another year.

For this, we regret that the Legislature printed only five hundred copies of this report. We would rather they had published ten or twenty times that number for general distribution. As it is, we urge upon every paper in that State to reprint it; to carry its facts and arguments home to every citizen of Indiana, and thus, we are confident, that every legislator will go up to the capital instructed to vote for a State Lunatic Asylum at next session. E. J.

Art. IV.—*Proceedings of the Medical Convention of Ohio, held at Columbus, on the 5th, 6th, and 7th of May*, 1841: *with several papers read before that body.* Columbus, Wright and Legg, 1841, pp. 84.

As originally proposed, this convention assembled every third year. At the second triennial session, held at Columbus in January, 1838, an adjournment was made to May 1839, and it was recommended that the meetings thereafter should be held annually in that month. An interval, howev-

* Report, page 5.

er, of two years occurred between that session and the one the proceedings of which we have before us.

The number in attendance at the last meeting, does not appear to have been so great as in the preceding years; about fifty persons only were present, representing fifteen counties of the State. Dr. George W. Boerstler was chosen President; Drs. Russel, Fisher, Harrison, Howard, Miller and Steele, Vice-Presidents; Dr. Kreider, Recording Secretary; Dr. Mendenhall, Corresponding Sec'y.; and Dr. Thompson, Treasurer.

The Journal of the convention does not exhibit a large amount of business, owing partly, no doubt, to the small number of members present, and partly to the circumstance that all the committees, save one, appointed at the last session, failed to make reports. Papers were presented by Drs. Harrison, Dawson and Bigelow, and a report on Auscultation and Percussion submitted by Drs. Mendenhall, Howard and Brayton. The reading and discussion of these papers, with the passage of sundry resolutions instructing divers committees to investigate a variety of subjects therein named, and make reports at the next meeting, constituted the chief exercises of the convention. We say *chief*, because a portion of time was occupied in listening to lectures on *tight-lacing*, *phrenology and quackery*. You smile, gentle reader! at such a conjunction of most dissimilar matters. Nevertheless it is true. The very first thing done in convention, after the body was organized, was the adoption of the following resolutions:

Resolved, That Professor Mussey be invited to deliver a discourse upon the subject of "Tight Lacing," at such time as may suit his convenience, during the session of this Convention.

Resolved, That Professor Mussey be invited to deliver a discourse upon the subject of Phrenology, at such time and place as may be designated, during the present session of the Convention.

And on the morning of the second day we have this:

Resolved, That Dr. J. P. Harrison be requested to deliver a lecture on the subject of quackery and empiricism, during the sitting of the Convention.

We sincerely hope the members were benefited by these

discourses; yet the idea of such "grave and reverend signiors" sitting in wrapt attention—*arrectis auribus*, to speak pedantically—under lectures on tight-lacing and quackery (we say nothing of phrenology), smacks a little of the absurd, and is somewhat laughter-moving withal. Are there no quacks and empirics in all the fifteen counties whence these gentlemen came, that they must needs have the creatures described? Verily, it would be strange if such omnipresent bipeds were not to be found in those regions somewhere! Are *corsets* growing more in favor there, or are the *laces* drawn tighter than formerly, that the convention must visit them with their objurgations? Truly, we did suppose that the "buckeye ladies" (whom we learned to prize, what time we dwelt north of the Ohio), with their characteristic good sense, had altogether eschewed such fearsome things! If, though, it be otherwise, and the keen sarcasm and massive argument of the eloquent lecturer (who, as some of our readers wot, wields with equal readiness the light blade of the Soldan and the ponderous mace of him of the Lion-heart), be insufficient to loose the said strings, we beg the convention to try the virtue of the famous composition of Ernulphus the bishop, and that the same be read "with good accent and good discretion" at the next meeting, adding uncle Toby's *Lillibullero* as a running accompaniment, if they choose. Badinage aside, though, it seems to us that such an assemblage is not suitable for matters of this kind. Popular lectures, even on well-worn subjects, may be good in their place, but surely that place is not a medical convention. Neither is it any better suited to demonstrations in anatomy; and we pray, therefore, that Professor Shotwell may *not* "prepare a subject and demonstrate the surgical anatomy of Hernia to the medical convention at its next meeting," as he is requested to do. If elementary instruction of this kind, or any other, be required by members, we suggest the propriety of their attending the prelections of that gentleman and his colleagues the ensuing winter.

The papers read to the convention, and printed with the proceedings, are not without interest, and give evidence of

what such an association may do, if its members are imbued with the proper spirit. Two of them are from the ready pen of Professor Harrison of the Medical College of Ohio. The one is a sketch of the diseases induced by mercury, the other is an essay on medical education. In the former, Prof. H. gives a rapid view of the various morbid effects resulting from the inordinate or inappropriate use of mercury, with the treatment applicable thereto. He divides these effects into the immediate and the remote. The former are those arising from "its violent action on the stomach, bowels, mouth, skin, and nervous system." The latter embrace "palsy, ulcerations of the soft parts, and diseases of the bones." He contends strenuously, in opposition to Musgrave, Carmichael, Chapman and others, that mercury does "produce diseases of the throat, skin and bones, with their investing membranes, analogous in aspect to those of an unequivocal venereal origin, and equally destructive in their progress." In support of this opinion, he adduces several cases derived partly from his own experience, which certainly go far towards substantiating it. He admits, however, that these diseases have no distinctive and peculiar marks whereby they may be distinguished from venereal affections of the same nature. In their treatment he relies chiefly on arsenic, in the form of Fowler's solution, and sarsaparilla. Narcotics will be required to abate morbid irritability, and where a cachectic state co-exists with this, as we presume it does in most instances (for it is doubtful whether mercury would produce the effects under consideration in any other than a depraved habit of body), tonics alone or combined with narcotics will be found to fulfil the indication better. The hydriodate of potash combined with the iodide of iron, given in pretty large doses, has of late years been used with remarkable success in these cases. As a local application to the ulcerated surfaces, the professor recommends a mixture of sulphate of copper, Peruvian bark, and balsam copaiva, which he also employs in the ordinary mercurial sore-mouth. Attention must be paid to regimen; the diet should be bland and nutritious, tea, coffee, and all stimulating drinks be-

ing avoided; flannel or cotton should be worn next the skin; a regulated temperature should be maintained in the apartment, and the patient must avoid a damp cold atmosphere.

The subject of medical education, although a very trite one, Prof. H. treats with his usual ability, and he has succeeded in making a very interesting essay out of it. His views on the subject are perfectly orthodox, and such as will meet with the entire concurrence of all who have the good of the profession at heart. He insists upon a high standard of qualifications, both as a preparation for the study of medicine and for the discharge of the responsible duties of a medical practitioner. To bring about the reforms which he conceives to be necessary, two modes are pointed out: 1st. That physicians should not receive as pupils young men who are deficient in moral or intellectual qualifications: 2nd. That the sessions of our medical schools should be prolonged, the number of chairs increased, and a greater length of time be devoted to the acquisition of a strictly professional education. Recommendations similar to these were promulgated ten years ago in an "Essay on Medical Education," from the pen of the senior editor of this journal, who at that time filled the chair of Theory and Practice in the medical college of our sister State. The following resolutions pertaining to the same subject, and apparently called forth by the reading of the essay, were adopted by the Convention:

Resolved, That the system of Medical Education in the United States is radically defective.

Resolved, That the evil can alone be remedied by those having charge of medical schools.

Resolved, That it be respectfully, but earnestly, recommended to the Trustees and Professors of the medical schools in the United States, to meet in Convention, at such time and place as may be agreed upon by themselves, to digest and recommend a general system of Medical Education.

Similar resolutions were passed at the second session of this body, in 1838. Subsequent to that period, the Medical Society of the State of New York named the 12th of May, 1840, and the city of Philadelphia, as a proper time and place for a gen-

eral meeting. This meeting proved a failure, as very few of the schools selected representatives to attend. (See West. Journal, vol. I., p. 366). The indifference and apathy manifested in relation to this subject, is truly a matter of astonishment. All concede the necessity of reform, and to secure it, a little concert of action would be amply sufficient. Indeed, it is in the power of one single school to effect this change; and that school is the University of Pennsylvania. Standing, as she confessedly does, at the head of similar institutions in this country, as well by her age as the long line of illustrious names that have graced her halls, she is bound by every tie of duty to herself, and the profession, to set the example. No one can doubt that if she were to do this, the desired reformation would instantly go forward. But so long as she withholds her assent, or refuses to take any decided step in the matter, it will be in vain to expect any alteration in the existing state of things.

We cannot, however, entirely agree with the second resolution quoted above. It is not in the power of medical schools *alone* to effect the reform. That much may be done by proper action on their part, with the other measures proposed, is freely admitted; yet this will not wholly guard against the admission of unworthy men into the profession. One source of evil lies deeper still; society at last must aid in applying the corrective. So long as people look to the *man* rather than his *skill* and *attainments*, and suffer themselves to be cajoled and wheedled; so long as individuals are found who will court and flatter, and

> "—— bend the pregnant hinges of the knee
> That thrift may follow fawning,"

so long will our noble profession be disgraced by base and miserable pretenders.

The "Report on Auscultation and Percussion" is short and pertinent. It sets forth in a few words the necessity of accurate diagnosis to the successful treatment of disease, and replies to the objections that have been raised against physical explo-

ration, by showing its usefulness in affections of the lungs, heart and abdominal viscera, and its importance in the diagnosis of pregnancy, &c. It asserts the practicability of physicians in country practice becoming skilful in the application of this means, and concludes with the following excellent sentiment: "it behooves every conscientious physician to avail himself of all the means in his power, by which certainty of doing good is added to the present scanty resources of our art."

The fourth article, entitled "Florula Lancastriensis," is a catalogue of the flowering and filicoid plants indigenous to Fairfield county, Ohio, accompanied by notes of such as are medicinal. More than 400 plants are contained in this list, which seems to have been drawn up with great care and labor. The author, Dr. Bigelow, urges upon his professional brethren the importance of the study of botany; he says he has found within the limits of his own county, more than one hundred and ninety species of plants possessing medicinal properties, less than one half of which have their medicinal histories reduced to anything like certainty. We commend the following remarks to the notice of our readers.

"With a little care and attention, every physician could become tolerably well acquainted with the local botany within the sphere of his daily avocations, and an enumeration of the species of plants from all quarters of the State, would be of great value to systematic botanists in affixing the precise limits and localities to our more valuable ones."

"There are many points in the study of this fascinating science, in which the enlightened practitioner of medicine must feel an abiding interest, particularly those points having reference to the anatomy and physiology of plants, and a faithful inquiry into their sensible and medicinal properties."

These considerations are certainly sufficient to entitle this science to a claim on our attention. But, apart from its interest in this respect, it has attractions that are peculiar to itself. It opens one of the purest sources of enjoyment that can be offered to the mind. Witness the ardor and devotion with which the botanist pursues his researches through all changes of time and seasons, never wearying, never tiring, and when

compelled to desist, burning with the same zeal as when he began. He seems to live in a little world of his own—a beautiful and ever-varying one, too, wherein nothing profane has ever entered, but which continues as bright and pure as when first called into existence by the Great Author of life.

The fifth and last paper is from the pen of Dr. Dawson, whose name is familiar to the readers of this journal. It relates to a form of fever that prevailed in the eastern part of Green County, Ohio, where the author resides, and bears the impress of an acute and inquiring mind. The season that preceded this epidemic was of an unusual kind, exhibiting the extremes of humidity and drought. Its effect on the health of the inhabitants was evinced rather by a change in the character of the ordinary diseases, than by any unusual amount of sickness. Remittent and intermittent fevers were more prevalent than formerly, and the latter visited sections of country previously exempt from it. The epidemic occurred both in winter and summer; it received a variety of names. Some called it typhus from its resemblance to that affection.

"*Symptoms.*—The onset of the disease was manifested by pain in the head, sometimes confined to a circumscribed spot: severe cases did occur, however, in which the cerebral distress was so inconsiderable as to be unnoticed. Some complained of chills in the commencement, though it was by no means a pathognomic of the disease.

The tongue was generally covered with a *thin white* fur, through which the papilla protruded, the sides and apex being red, and the shape not much changed from the normal. There was no appreciable abdominal tenderness in the commencement, but it generally supervened after a few days had elapsed, and with it protracted discharges from the bowels. The sanguiferous system was but little disturbed—the pulse *small* and *soft*, and seldom exceeded 80 beats to the minute. Skin *soft* and *natural*, except a slight elevation of temperature. Rose colored spots *occasionally* made their appearance over the whole surface, but always on the cheeks. They would make their appearance and recede again several times in the course of twenty-four hours. A dry cough attended most cases."

"This description seems to present no formidable array of symptoms; yet it is a fact, that the disease under the best di-

rected efforts of the physician, did sometimes last fifty days. Few cases recovered under twenty days, and it was not uncommon to see convalescence protracted to four or five weeks."

"Much evidence might be cited to prove that it was contagious, as much so as scarlatina, and generated and propogated in a similar manner."

Concerning the pathology of this disease, the author offers nothing but conjecture; as, owing to the circumstances surrounding him, he was precluded from making autopsic examinations. From the character of the symptoms, however, and the kind of treatment most successful, he infers that the principal lesion consisted in irritation of the mucous membrane of the alimentary canal, which, in protracted cases, ran into ulceration.

The treatment that proved most successful "was a modification of the physiological." General blood-letting was of doubtful value, and was employed with hesitation in consequence of the little disturbance of the sanguiferous system. Nevertheless the author's personal experience leads him to believe that in most cases where this remedy was omitted, local inflammation was apt to supervene, and that the course of the fever was more protracted. Mild purgatives were useful throughout the whole course of the disease. Emetics, though they produced their physiological effects promptly, did not exert any favorable influence on the malady. Ptisans, mucilaginous drinks, and the water of sub-acid fruits, were found serviceable in all stages. Indeed these, with laxatives, and stimulants in the latter stages (wine-whey proved the most useful), were the chief remedies employed.

"When the main force of the fever was subdued, it was generally a matter of much solicitude with the physician to see the approach of convalescence. His expectations, however sanguine, were doomed to disappointment. It was not uncommon for the fever in this stage, to remit. These remissions occupied the forenoon, lasting five or six hours. In the afternoon the exacerbations took place. These remissions and exacerbations were quotidian, and would sometimes last four or five weeks, to harass the patient and mortify the physician. Antiperiodics seemed to be somewhat indicated when the fever

assumed this form, but they answered no curative purpose at all. On the contrary, they aggravated the malady by increasing the exacerbation."

The author supposes this condition to have depended on morbid alterations in the alimentary canal; it was treated by "infusions of slippery-elm and gum-water."

The next meeting of the Convention, as was stated in our last, will be held on the 16th inst., in Cincinnati. We trust that it will be well attended. Associations of this kind are calculated to do a vast amount of good. The interchange of opinion which they invite, is essential to the improvement, if not to the very existence of our science; by it "time-honored" errors are corrected, new truths elicited, and a spirit of inquiry aroused. But they do more. They bring together individuals from various quarters of the country, and thus serve to break down those sectional prejudices and feelings which are the source of so much discord among medical men. They diffuse a spirit of emulation through the ranks of the profession, and thus elevate its character and dignity. They inspire sentiments of mutual respect and esteem among its members, and thus tend to soften the asperities that so often mark their intercourse. This consideration alone should lead us to regard them favorably; for it is painful to see men, whose daily avocations call into exercise the finer feelings of the heart, exhibit, as they frequently do, in their conduct towards each other, so much of the bitterness and gall that pertain to our fallen nature.

C.

Selections from American and Foreign Journals.

Anchylosis of the Lower Maxilla with the Temporal Bones. Dr. Payan, surgeon to the Hôtel Dieu at Aix, in a collection of facts on different diseases of the head, which he has just published, reports this remarkable case. It seems that the patent, 77 years of age, was attacked by the cholera morbus in 1835, and carried to the hospital, where he died in two days. It was observed upon his admission that he could not move the lower jaw, and that the tongue was protruded through an aperture formed by the loss of the four upper incisor teeth. His children and relations stated, that during his lifetime he had frequently told them that he had been unable to move his jaw from between four and five years of age, which he attributed to an accident he met with at that time, viz: the fall of a table upon his head, probably causing fracture of the maxilla near to the condyles. Upon dissection, complete ossification was found to have taken place with both temporal bones, and the union was so perfect, that no line of demarcation could be seen between them. All the teeth existed, with the exception of one or two molar, and the four upper incisors which had been extracted to admit the introduction of food. They were in close apposition with each other. The inferior incisors were pushed more forwards, and the molars more outwards, than in the natural state. In each parotid duct was found a calculus. No trace of fracture could be discovered in any part of the bone. There was no anchylosis of any other joint. This curious specimen has been frequently exhibited by M. Dubreuil to the medical students at Montpelier.

Cases of anchylosis of this articulation have been recorded before, but they have generally been found only when other joints had undergone the same process. An officer died at

Metz in 1803, who had long been affected with general rheumatism, brought on by fatigue during the war, in a cold and moist country. Upon dissection, every articulation was found anchylosed, and his skeleton, which is now in the museum of the École de Médicine, forms in reality a single bone.—*Lond. and Edin. Monthly Jour. of Med. Sci.*, from *Gaz. Med. de Paris*, 28 Aug, 1841.

Extraction of Foreign Bodies from the Ear by Syringing with cold water.—Mr. Carpenter of Castlecomer has successfully employed injections of cold water for the removal of foreign bodies from the ear. "The first case," he observes, "brought to me, some years back, was one in which the foreign body was a garden pea, which, as is usual, was pushed in as far as the tympanum by the interference of the child's friends. The instrument I selected was a very small forceps with blunt points, with which I could catch the pea, but could not move it, and, on endeavoring to do so, caused intolerable pain. It immediately occurred to me to inject cold water with force, in order to at least displace the pea, and perhaps thereby render it more manageable—I did so with a two-ounce syringe, and found the pea so far displaced as to lie at the orifice of the meatus, whence I removed it without further trouble or pain to the child. Since that I have extracted many peas in the same way—in some instances they have lain at the orifice, and in others been forced out completely. So far I was satisfied that peas could be removed by the above method, and will admit that I felt anxious to have an opportunity of trying my hand on something of more difficult extraction. About six months back that offered—the substance was a pebble of a most irregular shape, and so large that I was surprised how the child could have borne to introduce it—the meatus was not inflamed; but the pebble was so far in, and so wedged in its place, that to touch it ever so lightly with any instrument, was almost enough to throw the child into convulsions. I almost despaired of succeeding with the syringe, but made the trial, and not having a two ounce one at hand, used a pint one—the first injection failed; but, while using a second, the pebble, much to my satisfaction, was forced out on the napkin held under.

In the last case brought to me I could hardly feel the foreign body with a silver probe, nor could the child's parents tell

me what it was; however, knowing it to be small, I used a small sized syringe, and by one injection had a grain of oats at the orifice of the meatus.—*Dublin Medical Press*, June 20th, 1841.

New variety of Hernia—Hernia destitute of Peritoneal Sac. By M. Dumeaux.—The following remarkable disposition of parts was observed in the body of a man between 55 and 60 years of of age, who had a large scrotal hernia on the right side. After removing all the coverings of the tumor, the hernial sac, or what appeared to be the sac, instead of being a uniformly resisting membrane, presented very distinct muscular fasciculi, and the posterior wall of the cæcum was immediately recognized. On examination by the abdomen it was found that the cæcum, instead of occupying the iliac fossa, was placed on the abdominal wall, and covered by peritoneum on one of its surfaces only. Its adherent wall was engaged in the inguinal canal forming part of the hernial tumor. The free wall, covered with peritoneum, followed, being as it were invaginated in the former, and forming towards the abdomen a cavity or true hernial sac, in which seven or eight inches of intestine were engaged.

This singular species of hernia has never before been described. The preparation was presented to the Anatomical Society.—*B. and F. Med. Rev.* Oct. 1841, from *Annales de Chirurg.* July, 1841.

Cure of Ozæna.—Dr. Detmold of Hanover says, that he has never failed to cure ordinary ozæna (by which he means the chronic coryza accompanied by a stinking discharge from the nose and a flabby relaxed state of the Schneiderian membrane) by the use of an injection composed of one or two drachms of chloride of lime rubbed up in a mortar with thirteen ounces of decoction of rhatany root, and strained off after standing for half an hour. About half an ounce of this must be injected into the nose three or four times a day with a syringe whose point is sufficiently long to carry the fluid high up into the nasal passages. The use of the remedy should be accompanied by the occasional administration of purgatives. It is very beneficial also in cases of chronic otitis with offensive discharge from the ear.—*Ibid*, from *Holscher's Annals* B. 1804.

Regeneration and Union of Nerves.—By MM. Gunther and Schon. The following observations were made on rabbits, about fifty of which were operated on, sometimes by cutting across the ischiatic nerves, at other times by removing a portion varying from two to four lines in length. These physiologists describe the elementary fibres of the nerves as transparent cylinders with double tunics, filled with a fluid resembling liquid albumen. After maceration in water, or after death, this fluids coagulates and produces the turbid granular aspect which till now, has been considered its natural appearance. When the two extremities of a nerve which has been cut across become united, the nerve propagates impression through the uniting medium. This is done by means of true primary fibres having been formed through the uniting medium, and the following is the mode in which MM. Gunther and Schon have observed this to take place. After division of the nerve the two ends retract somewhat, the diameter of the neurilema becomes diminished, and the medullary substance is pushed out in a globular form; exudation of plastic lymph then occurs and fills the wound, and the cut extremities of the nerve become swollen, the upper extremity more than the latter. This tumefaction of the nerve itself, is owing to the presence of plastic lymph effused into the cellular tissue and also between the neurilema and primitive fibres.

The matter which unites the two ends of the nerve is at first amorphous, but by degrees primitive fibres shoot through the mass, and become visible at the earliest on the eighth week after the division. These new fibres are in every respect similar to the original fibres; but the granular exudation and the cellular tissue which surround and envelope them render them difficult of examination. These fibres are not parallel, but exhibit a confused arrangement.

With the regeneration of the fibres of the nerve returns the sensibility and mobility of the limb or organs to which the nerve was distributed.

But in general the function of the part is not so free as before the division:—the animals not being able to use the limb whose nerve had been divided so freely as the other. The influence of the will over the limb was also observed to be diminished. MM. Gunther and Schon account for this on the supposition which is borne out by their experiments, that the number of fibres which are regenerated is not equal to those which originally existed: besides, it appeared to them that the regenerated fibres occasionally united the ends of differ-

ent primitive fibres, so that the sensation was not always referred to its proper place. They consider that the regeneration or growth of the uniting fibre commenced at the superior extremity of the divided nerve, but concede that it is possible that it may also take place from the lower extremity.—*Ed. Med. & Surg. Journ.* Jan. 1842, from *Archives Generales*, March, 1841.

Experimental Researches on the Function of the Skin in Man and Animals.—M. Ducros, in a very experimental paper, shows that a coating of gum-lac put on the skins of animals, causes them to die in a longer or shorter time, by producing convulsive movements similar to epilepsy. When the animals, coated with gum-lac, were subjected to electricity, they died in a much shorter time. He next tried the effect of metallic coverings, as he entertained the notion that, because they had opposite electrical properties, the animals coated with them would die with symptoms of an opposite nature. He therefore cut off the hair from some animals and covered them with thin plates of tin (tin-foil), and found that they perished with symptoms of debilty, the reverse of what he had noticed when the coating consisted of a resinous substance. When the tin was covered with a coating of gum-lac, the animals perished still more rapidly. He then placed under the influence of electricity some of the animals covered with plates of tin, and found that, so long as they remained connected with the electrical current, their vigor appeared to be restored, but that, whenever it was arrested they appeared ready to perish.

The object of these experiments was to ascertain what would be the likely effect of such coverings in certain diseased states of the human frame, and especially in nervous or neuralgic affections, and in rheumatism. He reasoned, that, if metallic coverings deprived animals of life by producing rapid sinking of the vital powers, the same metallic plates applied to the human body would cure or remove those diseases which seemed to depend on an excess of organic life. On putting his plan to the test of practice, he was so fortunate as to find that it removed some nervous, and a few acute and chronic rheumatic affections.

This plan of treatment was of no avail in any case where the disease was dependent on or connected with organic le-

sions, or attended with fever, or swelling of the part, or with general weakness; on the contrary, in all these cases the metallic plates augmented the disorder.—*Edinburg Med. and Surg. Jour.* Jan. 1842, from *Comptes Rendus*, 20th Sept. 1841.

"*On Fibre.*" By Martin Barry, M. D., F. R. SS. Lond. and Edin.—[At meetings of the Royal Society of London, on Dec. 16, 1841, and Jan. 6, 1842, a paper 'On Fibre' was read by Dr. Martin Barry, of which we present our readers with the following analysis:—*Ed. N. Y. Lancet.*]

The author observes, that, in the mature blood corpuscle, there is often seen a flat filament, already formed within the corpuscle. In mammalia, including man, this filament is frequently annular: sometimes the ring is divided at a certain part, and sometimes one extremity overlaps the other. This is still more the case in birds, amphibia, and fishes, in which the filament is of such length as to constitute a coil. This filament is formed of the discs contained within the blood-corpuscle. In mammals, the discs entering into its formation are so few as to form a single ring: and hence the biconcave form of the corpuscle in this class, and the frequent annular form of the filament it produces. In the other vertebrata, the discs contained within the blood-corpuscles are too numerous for a single ring, and they consequently form a coil. At the outer part of this coil, the filament, already stated to be flat, often presents its edge; whence there arises a greater thickness of the corpuscle, and an appearance of being cut off abruptly at this part: while in the centre there is generally found the unappropriated portion of a nucleus; and hence the central eminence, surrounded by a depression, in those corpuscles which, from the above-mentioned cause, have the edge thickened. The nucleus of the blood-corpuscle in some instances resembles a ball of twine: being actually composed, at its outer part, of a coiled filament. In such of the invertebrata as the author has examined, the blood-corpuscle is likewise seen passing into a coil.

The filament thus formed within the blood corpuscle, has a remarkable structure; for it is not only flat, but deeply grooved on both surfaces, and consequently thinner in the middle than at the edges, which are rounded; so that the filament, when seen edgewise, appears at first sight to consist of segments. The line separating the apparent segments from one another is, however, not directly transverse, but oblique.

Portions of the clot in blood sometimes consist of filaments having a structure identical with that of the filament formed within the blood-corpuscle. The ring formed in the blood-corpuscle of man, and the coil formed in that of birds and reptiles, have been seen by the author unwinding themselves into the straight and often parallel filaments of the clot; changes which may also be seen occurring in blood placed under the microscope before its coagulation; and similar coils may be perceived scattered over the field of view, the coils here also appearing to be altered blood-corpuscles, in the act of unwinding themselves; filaments, having the same structure as the foregoing, are to be met with apparently in every tissue of the body. The author enumerates a great variety of organs in which he has observed the same kind of filaments.

Among vegetable structures, he subjected to microscopic examination the root, stem, leaf-stalk, and leaf, besides the several parts of the flower: and in no instance of phanerogamous plants, where a fibrous tissue exists, did he fail to find filaments of the same kind. On subsequently examining portions indiscriminately taken from ferns, mosses, fungi, lichens, and several of the marine algæ, he met with an equally general distribution of the same kind of filaments. The flat filament seen by the author in all these structures, of both animals and plants, he states to be that usually denominated a *fibre*. Its appearance is precisely such as that of the filament formed within the corpuscle of the blood. It is known, he remarks, that discoid corpuscles circulate in plants; and it remains to be seen whether or not filaments are formed also in these.

By gradually tracing the fibre or filament above-mentioned into similar objects of larger size, the author endeavors to show that it is not possible to draw a line of separation between the minutest filament, and an object being to all appearance composed of two spirals running in opposite directions, and interlacing at certain regular intervals; an arrangement which produces in the entire object a flattened form, and gives it a grooved appearance. It is, in fact, the structure which, for want of a better term, he has called a *flat filament*. The edge of this filament presents what, at first sight, seem like segments, but which, in reality, are the consecutive curves of a spiral thread. A transverse section of such an object is rudely represented by the figure 8. This is also precisely the appearance presented by the minutest filament, generally termed *Fibre;* and the author particularly refers to the oblique direction of the line separating the apparent seg-

ments into the smaller filament, in connection with the oblique direction of the spaces between the curves of the spiral threads in the larger one.

The spiral form, which has heretofore seemed wanting, or nearly so, in animal tissues, is then shown to be as general in animals as in plants. Nervous tissue, muscle, minute blood-vessels, and the crystalline lens, afford instances in proof of this. And if the author's view of identity in structure between the larger and the smaller filaments, be correct, it follows that spirals are much more general in plants themselves than has hitherto been supposed; spirals would thus appear, in fact, to be as universal as a fibrous structure.

The tendency to the spiral form manifests itself very early. Of this the most important instance is afforded by the corpuscle of the blood, as above described. The author has also obtained an interesting proof of it in cartilage from the ear of a rabbit; where the nucleus, lying loose in its cell, resembled a ball of twine, being composed, at its outer part, of a coiled filament, which it was giving off to weave the cell-wall;—this cell-wall being no other than the last-formed portion of what is termed the intercellular substance—the essential part of cartilage. The nuclei in cartilage, as well as those in other tissues, there is ground for believing to be descended, by fissiparous generation, from the nuclei of blood-corpuscles.

The author then describes the mode of origin of the flat filament or fibre, and its reproduction in various animal and vegetable tissues, which he enumerates. He conceives that each filament is a compound body which enlarges, and, from analogy, may contain the elements of future structures, formed by division and subdivision, to which no limits can be assigned.

He then traces the formation of muscle out of cells, which, according to his observations, are derived from corpuscles of the blood, to the state where there exists what is denominated the *fibril*. In this process there are to be observed the formation of a second order of tubes within the original tube; a peculiarly regular arrangement of discs within these second tubes; the formation, first of rings and then of spirals, out of discs so arranged; the interlacing of the spirals; and the origin, in the space circumscribed by these, of spirals having a minuter size; which in their turn surround others still more minute; and so on. The outer spirals enter for the most part into the formation of the investing membrane discovered by Schwann, but for the only complete description, in a formed state, we are indebted to Mr. Bowman. The inner spirals

constitute what are denominated the *fibrillæ*. The fibril appears to the author to be no other than a state of the object which he designates a *flat filament;* and which, as he shows, is a compound structure. The fibril he finds to be, not round and beaded, as it has been supposed, but a flat and grooved filament; the description above given of the structure of the filament being especially applicable here. This flat filament is so situated in the fasciculus of voluntary muscle, as to present its edge to the observer. It seems to have been the appearance presented by the edge of this filament, that is to say, by the curves of a spiral thread, that suggested the idea of longitudinal bead-like enlargements of the fibril, as producing striæ in the fasciculus of ordinary muscle. In the author's opinion, the dark longitudinal striæ are spaces (probably occupied by a lubricating fluid) between the edges of flat filaments, each filament being composed of two spiral threads, and the dark transverse striæ, rows of spaces between the curves of these spiral threads. The filament now mentioned, or its edge, seems to correspond to the *primitive marked thread* or *cylinder* of Fontana—to the *primitive fibre* of Valentin and Schwann—to the *marked filament* of Skey—to the *elementary fibre* of Mandl—to the *beaded fibril* of Schwann, Müller, Lauth, and Bowman—and to the *granular fibre* of Gerber. The changes known to be produced by the alternate shortening and lengthening of a single spiral are exhibited in the microscope by a fasciculus of spirals, not only in its length and thickness, but in the width of the spaces (*striæ*) between the curves of the spirals. And a muscle being no other than a vast bundle of spirals, it is in contraction short and thick, while in relaxation it is long and thin; and thus there occurs no flattening of bead-like segments in contraction. The author has found no segments that could undergo this change. These observations on the form of the ultimate threads in voluntary muscle, were first made on the larva of a Batrachian reptile, and have been confirmed by an examination of this structure in each class of vertebrated animals, as well as in the crustacea, mollusca, annelida, and insects.

He finds that the toothed fibre, discovered by Sir David Brewster in the crystalline lens, is formed out of an enlarged filament; the projecting portions of the spiral threads in the filament, that is, the apparent segments, becoming the teeth of that fibre.

The compound filaments are seen with peculiar distinctness in the blood-vessels of the arachnoid membrane. In connection with the spiral direction of the outer filament in these vessels, the author refers to the rouleaux in which the red

blood-discs are seen to arrange themselves, in the microscope, as probably indicating a tendency to produce spiral filaments. To form rouleaux, corpuscle joins itself to corpuscle, that is to say, ring to ring; and rings pass into coils. The union of such coils, end to end, would form a spiral. But the formation by the blood-corpuscles of these rouleaux is interesting in connection with some facts recorded by the author in a former memoir; namely, that many structures, including blood-vessels, have their origin in rows of cells derived from corpuscles of the blood. The human spermatozoon presented a disc with a pellucid depression, each of the two sides of the peripheral portion of which was extended into a thread; these two threads forming, by being twisted, the part usually designated as the tail. The occurrence of two tails, observed by Wagner, is accounted for by the author by the untwisting of these threads.

The author has noticed very curious resemblances in mould, arising from the decay of organic matter, to early stages in the formation of the most elaborate animal tissues, more particularly nerve and muscle. Flax has afforded satisfactory evidence of identity, not only in structure, but in the mode of reproduction, between animal and vegetable fibre.

Valentin had previously stated that in plants all secondary deposits take place in spiral lines. In the internal structure of animals, spirals have heretofore seemed to be wanting, or very nearly so. Should the facts recorded in this memoir, however, be established by the researches of other investigators, the author thinks the question in future may perhaps be, where is the 'secondary deposit' in animal structure, which is not connected with the spiral form? The spiral in animals, as he conceives he has shown, is in strictness not a secondary formation, but the most primary of all; and the question now is, whether it is not precisely so in plants.

In a postscript the author observes, that there are states of voluntary muscle in which the longitudinal filaments ('fibrillæ') have no concern in the production of the transverse striæ; these striæ being occasioned by the windings of spirals, within which very minute bundles of longitudinal filaments are contained and have their origin. The spirals are interlaced. When mature, they are flat and grooved filaments, having the compound structure above described. With the shortening of the longitudinal filaments ('fibrillæ') in muscular contraction, the surrounding spirals, and of course the striæ, become elongated and narrow; while in relaxation these changes are reversed *

[* We learn that the author has successfully demonstrated to Professor Owen and others, since the reading of the above paper, the facts described in it.—Ed. L.]

Fatal Hæmorrhage from the Extraction of a Tooth. By W. A. Roberts, Esq., Edinburgh.—Mr. C. P., of middle age, rather full-sized body, called upon me on Sunday, the 19th of December, 1841, requesting to have a tooth removed, that had given some uneasiness for a length of time; upon examination, I found the dens sapientiæ of the right side of the lower jaw loose, the crown gone, and removed it without difficulty with a pair of forceps generally used for extracting the temporary teeth of children. It had three small fangs, the anterior one being the longest; the hæmorrhage, nothing more than usual, had ceased ere he left, the alveolus being plugged with lint, wetted with the camphorated spirit of wine. At half past four of the same day, Mr. P. called again, the blood running in a continuous stream, evidently from the anterior alveolus—cleaned it out from the bottom, and filled it up firmly with a strip of lint, pressed down with a curved instrument; when full, applied a compress of cork, fitted to the part and pressed upon firmly by the dens sapientiæ of the upper jaw; likewise securely bandaged the jaw. Ordered astringent lotions, for the hæmorrhage was again checked, the saliva coming away unstained.

At this visit the patient informed me that he had a tooth taken out a few years ago, which was followed by copious hæmorrhage for nearly three days, but was checked by the application of caustic; also that lately his gums had bled to a considerable extent, and for a fortnight at a time. Of all this I was unfortunately ignorant until after three hours had elapsed from the removal of the root. There was nothing indicating any hæmorrhagic tendency at the time I saw him first, and, being a stranger to me, I was consequently not acquainted with the history of his habit of body.

I was sent for early on Monday morning, and found the hæmorrhage had continued without intermission during the night. He had deferred sending for me, unfortunately, as I had requested, supposing the bleeding would stop of itself. I found no coagulum about the mouth, or in what he had spat out, as in ordinary hæmorrhage, the alveolus being as clear as when the stump was first taken away. I put a piece of lunar caustic, the size of a pin's head, into the bleeding alveolus, pressed it down, and plugged with sponge tent and bandaged as formerly. The bleeding was again stopped. Styptics, lotions of kino, and alum, were used with benefit.

For more than an hour after this all appeared safe. In the course of the day, Dr. Hay, of Queen street, the family medical attendant, saw him, and found the hæmorrhage as bad as

ever. Applied various styptics without doing much good. On the 21st, Dr. Hay applied the actual cautery without benefit, attributing this circumstance to the instrument used, the first thing at hand being too thick at the point. I followed up Dr. Hay's suggestion, and used an iron better adapted to reach the bleeding vessel, but with no good result. During the operation the patient started, by which the under lip was slightly burnt. And here I may mention the blood continued to flow from the lip pretty freely for several days.

Our success until the 23d was various, and on that day, if anything, the hæmorrhage was worse, and accompanied by alarming symptoms, with weak pulse, giddiness, &c. I had serious thoughts it would be necessary to take up the carotid. Towards evening an improvement took place, the bleeding being once more under command by pressure, &c. Mild purgatives ordered, in consequence of a considerable quantity of blood having been swallowed.

At 2 A. M., of the following morning, I was sent for, as the patient had sunk to an alarming degree. Dr. Hay and myself attended immediately; we found him recovering from a fainting fit. Wine given, &c. He rallied; and upon examination found there was now no active hæmorrhage from the original source; nor was there any afterwards. In the course of the day Mr. Nasmyth, of George street, saw the case, which was going on favorably, with the exception of a tolerably smart oozing from the gums, and slight bleeding from the left nostril, which commenced after the hæmorrhage from the alveolus had become less active. Upon the removal of the bandages the face was found much discolored and swollen from the effusion of blood into the cellular tissue, giving all the appearance of the result of a blow. Pulse good; countenance less anxious; getting a quiet sleep occasionally; the sloughs drying up under the use of the camphorated spirit, and latterly of turpentine, with no increase of hæmorrhage. Mild aperients given; a little wine, and the use of tonics: up to the 27th, upon the whole, continuing to improve. The oozing from the gums and nostril being occasionally troublesome, a strong solution of the nitrate of silver was painted over them with advantage. At this stage Dr. Hay and Mr. Nasmyth considered it unnecessary to continue our meetings as we had done, but to see him occasionally, Dr. Hay taking charge of the case, the patient remaining much in the same state until the 7th of January, 1842.

I had not seen the case for two days, when Dr. Hay informed me that a change for the worse had taken place—all the old

symptoms, aggravated by a severe pain all over the mouth and head. Mr. Nasmyth and myself saw the patient on Sunday, the 9th, the third from the removal of the tooth, and found him much reduced; the gums turgid to a remarkable degree, and of a deep purple color, almost covering the teeth, and bleeding freely; the blood was again oozing from the alveolus, and slightly from the nostril; the features collapsed; complained of blindness; and all the symptoms of the disease "purpura hæmorrhagica" more decided. Mr. Nasmyth employed a solution of the proto-nitrate of mercury to the gums, which only checked the hæmorrhage for a short time. Wine (claret) given freely, stimulants, tonics, &c.

On Sunday, the 9th, Dr. Abercromby was consulted; but although all was done that such eminent men would be expected to do, death put an end to this painfully-interesting case on the Tuesday following, being three weeks and two days in duration.

In the course of my practice I have met with several cases of severe hæmorrhage following the extraction of a tooth, but have always succeeded, with the exception of the above case, in arresting it by pressure. In one case in particular the hæmorrhage was alarming. Upon examining the mouth, I discovered a portion of the alveolar process that had been splintered; upon removing this and the clot which nearly filled the mouth, and, in fact, was acting as a poultice, and washing out the bleeding alveolus with warm water, I cut a small piece of sponge tent nearly to the size of the cavity, and pressed it firmly down with lint; over that a compress of cork, and all securely bandaged, with complete success. The heat of the mouth softens wax; but sponge expands, and being confined, must of necessity press upon the mouth of the bleeding vessel. I have occasionally tried replacing the tooth with lint wrapped round the fangs, but never could depend upon it, but should think it would answer well with any of the single-rooted teeth, or bicuspids: I never had occasion to try it in any of these teeth. In passing I may remark, that in all the cases that have come under my notice, I never saw the application of the actual cautery of much service; still in extreme cases we are bound to employ it.—*Boston Med. and Surg. Journal*, from the *London Lancet.*

The Structure of the Human Placenta. By John Dalrymple, Esq., Assistant Surgeon to the London Ophthalmic Infirmary.—[In the early part of last year, Mr. D., having

pursued some anatomical investigations of the structure of the human placenta at the term, and having made several drawings of the injected capillaries of the tuft, afterwards had an opportunity of seeing the copies of Weber's drawings, given in the Icones Physiologicæ of Wagner, and transferred to the pages of Dr. Willis's translation of the latter author's Physiology.

The resemblance of the present drawings to those given by Dr. Willis was so striking as to go far, of itself, to prove the correctness of both draughtsmen, and to corroborate the views entertained by Weber of the anatomical conditions of the organ. They differ, also, from the engravings of Dr. Reid (given in the January number of the Edinburgh Medical and Surgical Journal for 1841), inasmuch as no where could be seen an artery and vein running side by side, forming an apparent single vessel, though with a double tube, and terminating abruptly in blunt extremities, where the anastomoses took place between them.

The following are the results of Mr. D's. researches and examinations as given in a recent number of the London Medical Gazette:—]

1. That the placenta was made up of innumerable subdivisions of the umbilical vessels, terminating in beautiful coils and convoluted capillaries, which formed tufts or bouquets of vessels clothed by a prolongation of the endo-chorion derived from the fœtal surface of the organ.

2. That nowhere did a division of an umbilical artery terminate otherwise than in a branch of the umbilical vein; and each branch, as well as tuft of vessels, was covered by a prolongation of the before named membrane.

3. That each tuft was, in fact, a real villus; the endo-chorion being covered externally with an epithelium-like tissue, having nucleated cells and corpuscles.

4. The uterine surface of the placenta is covered by the decidua which does not appear to enter further into the structure of the organ than between the lobules; and the depth to which it thus penetrates varies with the depth of the fissures.

5. That fibrous bands stretch from the fœtal to the placental surface of the organ, giving firmness and support to the vessels.

6. That there are no defined cells in the placenta, but that the nutrient fluids of the mother are poured into the interstices of the tufts, which are not bound or connected together by a common cellular tissue.

7. That on the decidual surface of the placenta are thinly

scattered, here and there, blunt conical papillæ, about a line and a half in length, made up of innumerable coiled and contorted capillaries. Query.—Are these the analogues of the fœtal cotyledons of the ruminant?

From these observations, which were given in a minute detail, the author has attempted to simplify the functions of the human placenta.

He observes, that in the incubated egg, in consequence of the non-connexion between the embryo and parent, a nutrient and a respiratory organ is indispensable, and hence the more complicated system of vessels. That in the oviparous vertebrata, the vitellary sac, and the omphalo-mesenteric vessels represent the placenta of mammalia, which is the absorbent organ of the fœtus. But while in the one case the nutrient materials of the mother, already aerated by her lungs, are conveyed by the uterine arteries for absorption and nutrition of the embryo, in the other the materials of the blood are absorbed by the folds of the vitelline sac, and conveyed through the circulation of the young bird, requiring, however, contact with oxygen for a second circulation: hence a new membrane, or one that is persistent up to the time of independent respiration, viz: the allantois; and hence, also, the more complicated system of its vessels. The allantois, as a respiratory membrane, exists only as a rudimentary organ in mammalia, and the function of the placenta being solely that of nutrition by already oxygenized materials, the cord contains only a simple system of incurrent and excurrent vessels.

Supposed Polypus Nasi.—A young woman entered the Hospital of Clermont, under M. Fleury, to be operated on for polypus of the nasal fossæ, of which affection she had all the symptoms. At about 12 millimetres within each nostril, appeared a round whitish tumor which blocked up the passage. A stylet passed along the septum narium, penetrated easily into the nostril, but upon the external side of the nostril it was arrested by the pedicle of the tumor. An attempt was made to remove it in the ordinary way by the polypus forceps, but without success, and at each trial the patient complained of pain extending all over the head. Examining the tumor anew, the surgeon found that the excrescence taken for a polypus was only a prolongation of the pituitary membrane, which was folded over and thus reached the septum. It was the fold

of membrane which in the normal state passes from the inferior turbinated bone, which from some unknown cause had become hypertrophied. The part was removed by a single cut of the curved scissors.

A similar case occurred at Hotel Dieu, under Dupuytren, in 1833. A M. Huckster presented herself with a red fungous tumor, projecting from the left nostril, and having the appearance of a polypus. Finding the base very large, some doubt was entertained as to the nature of this tumor. By the use of topical astringents the size was so much diminished that it was easy to see that the tumor was only a swelling of the mucous membrane lining the septum narium. Dupuytren insisted very strongly at his Clinique on the error of diagnosis to which such a case might give rise.—*N. Y. Med. Gaz.*

Quinine in Asthma. By B. R. Hogan, U. S. A.—The value and importance of *quinine* in all paroxysmal and congestive diseases, have secured for it a high place in our catalogue of therapeutic agents. In the latter condition of any of the important organs, it is the safest and most efficacious agent in the materia medica. From its happy influence in relieving congestion, in our autumnal fevers, I was, *à priori*, induced to administer it in asthma. In every instance in which I have given it, or known it to be administered, the complete relief of the *dyspnœa*, and termination of the paroxysm, have succeeded in an hour. Subsequent attacks have been warded off. The paroxysm is as *tractable* to the influence of quinine as the slightest quotidian.

In the forming stage of croup, two grains of quinine, and a snuff plaster to the breast of a child two years old, parried the attack.

My friend, John A. English, M. D., of Cohaba, Ala., has used it with complete success, in a long-standing case of asthma, which had resisted the usual remedies. Four grains of quinine "operated like a charm," and relieved the patient in thirty minutes.

I communicate to you this important effect of quinine, in order that the profession may scrutinize the high claim I set up for it, and, by further experience, direct in what cases it may be most beneficially administered in one of the most distressing and intractable diseases "which flesh is heir to." From two to eight grains of the sulph. quinine, at a dose, to be repeated in an hour if not relieved.—*Am. Med. Intell.*

On the Sounds of the Heart. By M. Cruveilhier.—From his recent investigations on this subject, M. Cruveilher is led to infer, contrary to the general belief, and certainly in opposition to our own researches, that both sounds of the heart are seated at the origin of the pulmonary artery and the aorta, and that they are owing to the clacking of the semilunar valves:—that the first sound which coincides with the systole of the ventricles. and the dilatation of the arteries, is the result of the elevation of the semilunar valves which had been previously depressed,—and that the second, which coincides with the dilatation of the ventricles and the contraction of the arteries, is owing to the depression of the semilunar valves by the refluent blood.

The subject of the sounds of the heart is ably discussed in the work of Dr. Hope, commenced in this number of the "Library," which contains, in addition to the experiments of European observers, those of the able and estimable American Editor, Dr. Pennock.—*Am. Med. Library and Intell.*

Nitrate of Silver and Ipecacuanha in Diarrhœa and Dysentery.—Prof. Trousseau, of the Necker Hospital, has employed this combination in both the acute and chronic forms of these two diseases, and with great success. In a late number of the *Journal des Connaissances Medico-Chirurgicales* we find a report of several of the cases. In cases of dysentery an emetic of ipecacuanha was first given, and then an enema containing 25 centigrammes (5 *grains*) of nitrate of silver in 20 ounces of water. The dysentery was often checked by a single enema, but the treatment was generally continued for four or five days. It was equally useful, according to Prof. Trousseau, whether the disease occupied the colon or the ilium, only in the latter case, instead of enemata the medicine was given in pill—the dose 2½ centigrammes (½ *grain*) to an adult. To a child with chronic diarrhœa, 1–5th grain was given by the mouth, or a grain in enema.—*N. Y. Med. Gaz.*

Rectifications in the Practice of Auscultation and Percussion. By Dr. Joseph Skoda, Teacher of Practical Medicine in the Hospital of Vienna.—The following observations on auscultation, extracted from the lectures of Dr. Skoda, of Vienna, by Dr. Drysdale and Dr. Russell, will be interest-

ing to the English reader; as they place in a new light many facts which we have been accustomed to view differently. They have, moreover, been revised by Dr. Skoda himself.

All will acknowledge, that as the voice is produced in the larynx, it must invariably be transmitted thence to the different parts of the chest; and at first sight it would appear that the common opinion entertained by the profession is correct, namely, that its greater or less distinctness is owing to the good or bad conducting power of the parts lying between the larynx and the parietes of the chest. The correctness of this opinion, however, is very doubtful. For example, in pneumonia, when there is hepatization of the lung, the voice is sometimes distinct, and at other times very indistinct, while percussion shows that no particular change has taken place.

The cause of the occasional disappearance of the resonance of the voice is the obstruction by fluid matter of the bronchial tubes of the hepatized portion of the lung; for the resonance reappears readily when the patient makes a deep inspiration or coughs. This disappearance and return of the resonance, while in other essential particulars the hepatization remains the same, does not accord with the commonly assigned cause; for, according to it, it would be a matter of indifference whether the bronchial tubes contained air or not. In pleuritic effusion into the cavity of the chest, the intensity of the resonance of the voice diminishes as the quantity of the exudation increases; while the contrary should happen if the increased distinctness of the voice at any stage of the effusion depended on the superior conducting power of the interposed fluid.

The question of the superiority in conducting power of dense over rare bodies, has been too much regarded as an abstract law, without paying sufficient attention to the particular circumstances which may modify or prevent its operation. It is quite true that dense bodies conduct the sound more readily than rare ones, but only if the sound be confined to the medium in which it is formed, for it passes with difficulty from one medium to another. For example, the slightest scratching at the end of a long pole is heard distinctly when the other end is placed in contact with the ear, while, if this be not done, (*i. e.* if the sound be transmitted by the air), nothing at all is heard. The striking together of two stones under water, when the head is immersed, is distinctly heard, while no sound is audible when it is taken out. On the other hand the human voice, which is formed in the air, is heard furthest in that medium. When the head is dipped into water, sounds

produced in the air are heard very faintly or not at all; and solid substances, as a board or a wall, interrupt sounds more or less completely. The laws of physics teach us further, that sound is more or less reflected in its transmission from a rare medium to a denser one, and that the new medium takes up less than would have been propagated in the same space had it remained in the medium by which it had been till then transmitted; and the less sound is taken up by the new medium, the greater the difference of consistence and coherence between the two media. The reason why enclosed passages and tubes, whose walls are of solid materials, conduct sounds better than the open air is, because they reflect the vibrations which are thus confined to a small space, and prevented from being dispersed and lost in the surrounding air. If the walls of the tube were instrumental in conducting the sound, it is singular that a hollow tube should be used as a stethoscope, and not a solid cylinder of wood or metal. The voice, therefore, reaches the parenchyma of the lungs, not through the solid parts, but through the air in the trachea and bronchia, and ought to be carried further in the healthy lung, in which the air penetrates, into the air-cells, than in the hepatized lung, where the air-cells and smaller bronchia are obliterated. These vibrations, likewise, should pass more easily from the ear into the light tissue of the healthy lung than to the condensed parenchyma of the hepatized one, according to the law explained above.

A consideration of these facts would be almost sufficient in themselves to prevent us from acquiescing in the ordinary opinion, that the reason of the voice being louder when the lung is hepatized, than when it is sound and spongy, depends upon its being better conducted by the tissue of the lung when dense than when in its natural condition. Moreover, Dr. Skoda has set this matter to rest by the following simple experiment, which he usually performs in the presence of his class, and which any one may easily repeat.

If the ear be applied to a stethoscope placed successively on corresponding parts of a sound and then of a hepatized lung removed from the body, the voice of another person who speaks through a stethoscope placed upon the lung at an equal distance in both cases, will be heard somewhat more distinctly in the sound than in the hepatized lung; but the distinction is so insignificant, that, were the reverse the case, it would not account for the very marked difference in such a condition of the lungs in the living subject.

Consonance is a term adopted by Dr. Skoda to express a

well known phenomenon; and it may be here properly explained.

A tense guitar string sounds in unison with a note produced in its vicinity, either by another musical instrument or by the voice. A tuning fork held in the air emits a much weaker sound than when placed upon a table or chest. The table or chest must increase the intensity of the sound by assuming the same vibrations as the tuning fork, or, in other words, by consonating with it. The note of a Jew's harp is scarcely perceptible when it is struck in the air, and it is heard much more distinctly when played in the mouth. Thus the air in the mouth must increase the sound of the Jew's harp, *i. e.* must consonate with it.

It sometimes happens that the voice is heard more strongly at the thorax than at the laynx, which in itself is sufficient to show that its strength is increased by means of consonance within the chest. The different degrees of the intensity of the voice heard at the thorax, may be explained by the different strength of the consonance within the chest. To ascertain these changes we must disover what it is within the chest that consonates with the voice, and by what circumstances the consonance is liable to be altered.

The voice, as it issues from the mouth, is composed of the sound formed at the larynx, and the consonating sounds produced at the pharynx, mouth, and nasal cavities. This is shown by the alteration the voice undergoes by the opening and shutting of the nostrils and mouth, while there is no change made in the larynx. The pitch of the voice is evidently fixed by the larynx alone, and the opening and shutting of the nostrils and mouth has no influence upon it; the articulation of the voice, however, and its timbre, depend upon the mouth and nostrils.

As it is certain that the air in the pharynx, mouth and nostrils, consonates with the sound formed in the larynx, there can be no doubt that the air in the trachea and bronchiæ may also be thrown into consonant vibrations with the sounds formed at the larynx. Hence it is the air in the chest, and not the parenchyma of the lungs, which consonates with the voice at the larynx, as the latter seems ill adapted for consonating, being neither stiff nor sufficiently tense. Those substances, such as air, tense strings, membranes, slips of wood, and tin plates, in which a musical sound is most readily produced, are most easily thrown into consonant vibrations.

Air can consonate only when confined within a circumscribed space. In the open air the human voice, and every

other sound, is heard more feebly than in a room. The air confined within the box of a guitar, violin, piano, &c., consonates with the note struck on the strings, while the sound is not increased by the consonance of the external air. The strength of the consonance depends upon the size and form of the space in which the air is confined, and upon the properties of the walls which bound the space. It appears that the consonating sound of the inclosed air will be stronger the more perfectly the walls reflect the sounds which spread through the air. A space surrounded by solid walls produces the greatest consonance, while in a linen tent the sound is but little increased. The cause of the strengthening of sounds by the speaking trumpet is well known.

The deductions drawn from the physical principles just referred to may be used in explaining the consonance of the voice in the chest. The air in the trachea and bronchia can consonate with the voice in as far as their walls resemble the walls of the larynx, mouth, and nasal cavities, in their power of reflecting sound. In the trachea, the walls of which consist of cartilage, the voice consonates almost as strongly as it sounds in the larynx. In the two branches also into which the trachea divides the consonance must be nearly as perfect. On the entrance of the bronchia into the parenchyma of the lung they have no longer cartilaginous rings, but merely thin irregular plates of cartilage interspersed in the fibrous tissue. As the bronchia ramify, these plants become smaller, thinner, and less numerous, and at last disappear altogether, and the finest twigs of the bronchia consist merely of membranous canals. In the normal state of the parenchyma of the lung the air in the bronchia consonates less strongly with the voice than that in the trachea, in proportion to the smaller number of cartilages they contain. The conditions which increase the consonance of the voice in the air contained within the bronchia that ramify in the parenchyma of the lung are either that the walls of the bronchia have become cartilaginous, or if still membranous, very thick, or that the surrounding tissue of the lungs has become devoid of air;—in all these conditions the walls reflect the sound more strongly than the membranous walls of the normal bronchia;—and there must be no interruption of continuity between the air in the bronchia and that in the larynx. If the air in a confined space be thrown into either original or imported autophonous vibrations, which give rise to sound, the surrounding walls not unfrequently partake of the same vibrations, and they do this the more readily the less stiff and hard they are.

In this respect a portion of the small intestine represents pretty well the more membranous parts of the bronchia, and a portion of the heart and liver the hepatized lung. If a person speaks through a stethoscope placed on one end of a moderately inflated small intestine, consonant vibrations of the voice, in the air within the intestine, may be heard by another person listening through a stethoscope placed on the other end of the intestine. If a layer of solid or fluid substance be interposed between the mouth of the stethoscope and the intestine, as, for example, a piece of liver or of intestine filled with water, the sound is heard very indistinctly, and not at all if the thickness of the interposed substance reaches half an inch.

If a passage be bored in the liver, so as not completely to pierce it through, and this be spoken into by means of a stethoscope accurately fitted into the entrance of it, the voice may be heard along the whole length of the passage, and for a considerable distance on each side, through a stethoscope placed over it, so strong, that it by far exceeds in intensity the voice proceeding from the mouth of the speaker, which is by the free air.—*Braithwaite's Retrospect*, *No.* 4, and *Edinburgh Med. and Surg. Journ.* July, 1841.

Ioduret of Sulphur in Porrigo.—Dr. Wm. Davidson states that he has found no remedy so efficacious in the treatment of porrigo, as the ioduret of sulphur, having repeatedly succeeded in curing the patient permanently with it after a long and fruitless trial with other remedies. His method of treatment is the following:

The head is first well washed with soap and water, the hair is then cut as short as possible with scissors, a poultice is applied, and continued for a day or two if necessary, to soften the crusts, which being removed as thoroughly as possible, the hair is closely shaved. In general, the ointment is not applied until the head has been shaved, but if pediculi be present, it is employed from the commencement, in order speedily to extinguish these vermin. The proportion of ioduret of sulphur employed has varied from 20 to 40 grains to one ounce of axunge; but, in general, the latter quantity may be safely used from the beginning, unless there be some unusual inflammatory action present; for it seldom excites any particular pain or irritation. As a general rule, the daily applica-

tion of the ointment will be sufficient, but in some cases, it is advisable to use it twice a day in order to facilitate the cure.

Alteratives, or any particular internal treatment, have rarely been resorted to, when the general health was tolerably good, Laxatives have occasionally been prescribed, and a mild farinaceous or milk diet.— *London and Edinburgh Monthly Journ. of Med. Sci.* Dec. 1841.

Pharmacy in France.—The School of Pharmacy in Paris comprises five titular professors, "*professeurs titulaires*," and three assistant professors, "*professeurs adjoints*." The other schools have three titular and two assistant professors. In each school there are also associated assistants, "*agrégés*," appointed for five years, who take the place of the professors in case of their absence, and assist at examinations. In the school in Paris there are five associate assistants, and three in the schools of Montpelier and Strasbourg. The titular and assistant professors are appointed by the minister of public instruction, from a double list of presentations, made, the one by the *School of Pharmacy*, and the other by the *Faculty of Medicine* of the town in which the school is situated. Each list of presentations contains the names of two candidates, but the same candidates may be presented both by the School of Pharmacy and by the Faculty of Medicine. No one can be named as titular professor who is not a doctor in physical sciences, and thirty years of age. The assistant professors are required to be licentiates in physical sciences, and twenty-five years of age. Both are required to have been admitted Pharmaciens in one of the schools of Pharmacy. The associated assistants are to be appointed by "*concours*," in a manner to be hereafter arranged in the council of public instruction. To be admitted to the "*concours*," it will be sufficient to produce the diploma of a Pharmacien and of a bachelor in physical sciences. The director of the school is to be chosen by the minister of public instruction, from among the titular professors. He is to be in office for five years, and is eligible for re-election. Each school is provided with a responsible secretary, chosen by the minister of public instruction, from among the titular or assistant professors. There are also one or more "*preparateurs*," who must have the degree of bachelor of physical sciences, and are appointed by the director, with the concurrence of the professors. The director ap-

points the officers and servants. The *instruction* in each school comprises:—

First Year.—Physics, Chemistry, and the Natural History of Medicines.

Second Year.—Natural History of Medicines, Materia Medica, and Pharmacy, properly so called.

Third Year.—Toxicology; and in the practical school, Chemical and Pharmaceutical manipulations.

No candidate can be admitted to an examination for the title of Pharmacien, who has not obtained the degree of bachelor of letters. Besides the two professors in medicine who are appointed to officiate at the examinations, three members of the College of Pharmacy must also be present, namely, two titular or assistant professors, and one associated assistant. The students of the Schools of Pharmacy, who have gained prizes at the "*concours*," are exempted from the fees. The amount remitted for each prize is to be regulated by the university. The names of the successful students are published.

The *receipts* and *expenditure* of the Schools of Pharmacy are carried to the national budget of public instruction. The titular Professor in Paris, is to receive a fixed annual salary of 4000 francs; in the departments of 3000 francs. The assistant Professors, in Paris, are to receive an annual salary of 2,400 francs; in the departments, 1,500 francs. The Director is to receive in addition, as a jointure, an annual stipend of 1,500 francs, in Paris, and 1000 francs in other colleges. The salary of the Secretary, in Paris, is 3000 francs; in the other schools, 1,500 francs. The salary of the Preparateurs, is 1,200 francs. The payment for attendance at the examinations is 10 francs for those functionaries who are called upon to officiate. The same is allowed to the professors, who are charged with the examination of herbalists. The fee for the annual certificate, granted to each student, is fixed at 36 francs in each of the schools. The charge for examinations remains unaltered; for the first examination, 200 francs; for the second, 200 francs; for the third, 500 francs. The expenses of operations and demonstrations, incurred during the third year, which are defrayed by the candidates, are fixed at 200 francs, in Paris, and 150 francs in the other schools.

The acquirement of the diploma of Bachelor of Letters, will not be required in the candidates for examination, until the 1st of February, 1844.—*Pharmaceut. Transactions, Oct.* 1, 1841.

Death from Erysipelas: Pricks by a Scalpel—Slight Razor Cut—Scratch by a Nail—Pulling out a Mole—Remedy for Bee Stings. By James Mease, M. D., of Philadelphia.—In the month of December last, it was stated in the newspapers, that a young man had died at Framingham, Connecticut, in consequence of using the same razor, (without wiping) to shave himself, which he had just before employed to shave his deceased father. The impression was, that some morbid matter on the face of the father had been applied to that of the son, and had caused his death. The principle of action—*humani nihil à me alienum puto*, might have been sufficient for me to inquire about the fact, but more was concerned than the indulgence of professional curiosity, or a benevolent feeling:—a life was in question; I therefore determined to ascertain the particulars, and accordingly addressed a letter to a gentleman resident in the town, requesting a communication of them. From him I received the following printed article, by the attending physician, Dr. Whitney, which appears to have been addressed to the editor of the newspaper, published in the place where the parties resided.

"*Framingham, Oct.* 29, 1841.

"Mr. Editor.—Having seen different accounts in the newspapers respecting the death of our very worthy and esteemed townsman, (Mr. Henry W. Coolidge) and knowing the circumstances of the case, I take the liberty of stating them to you as they occurred. The aged father, who had been sick for some time, died of a hepatic disease. He had too, as is frequently the case, at the termination of many diseases, a very bad thrush or canker in the mouth, attended with frequent hemorrhages. The son, who had always enjoyed good health and was well at this time, (with the exception of what he termed a cold sore or two on his lip) shaved the father after his decease. Then with the same razor, brush and soap, he shaved himself immediately. This was on Tuesday, and by the Saturday following, one of the sores upon the lip became very troublesome, affecting it internally and externally. On Sunday his disease progressed, and thus continued daily to increase, producinga most hideous swelling of the head and face, till the next Saturday, when he died. The disease was no doubt gangrenous erysipelas. Was it an idiopathic disease, or was it communicated from the father by means of the brush? Should think the latter highly probable.

"Yours, with respect, "S. W."

I presume the sores on the lip must have been irritated by

the edge of the razor, and given rise to the erysipelas. That the cause suggested was quite sufficient to produce this often unmanageable disease, is probable from our knowledge of its frequent occurrence after apparently slight local affections, and of serious consequences, and even death from them. Many anatomists have died from the irritation roused in the system by pricking a finger with a scalpel. Falck, an English author on syphilis, and of other medical works, and two professors of the Medical School in Dublin, died from the effects of the first accident. Falck, many years since, and the two last within ten or twelve years. Another lost his life from scratching his hand with the sharp edge of a rib. A few weeks since, a man cut one of his fingers when strapping his razor, and died shortly after, from inflammation and gangrene in his hand and arm. Another scratched his finger last year, with a nail in a barrel which he was handling, and died in the same way. I knew a dreadful and mortal cancer which destroyed the lower jaw, and finally life, to follow the pulling out a small mole in the chin; and I have recorded several cases of death from the poison of honey bees, an humble bee, and wasps, which they had manufactured from the sugar, or saccharine fluid sucked by them from flowers, fruits, or sweet cider. Death took place in 10, 20, and 30 minutes after the stings were inflicted.* The poison of spiders has been equally mortal as that of bees. But what was the modus operandi of these venoms? why, you will say, they *destroyed the vital principle*,—certainly,—but what is this? the answer leaves the inquirer as wise as before he asked the question. Here is a fine and new subject for a prize essay, by some learned medical corporate body. By the way, since the publication of my paper just referred to, a case occurred in the vicinity of Philadelphia, of a bee-sting which was attended with spasms and such high excitement as to require venesection twice. Aqua ammonia was also liberally given with good effect. This remedy should be applied immediately to the part after a sting, and also given internally, every ten or fifteen minutes, in doses of 10 or 15 drops in water, and the vapor inhaled by the nostrils.—*Am. Med. Intelligencer.*

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* Amer. Journal of Med. Sciences, for Nov. 1836.

THE WESTERN JOURNAL.

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LOUISVILLE, MAY 1, 1842.

THE PAST WINTER AND PRESENT SPRING.

It may be received as a fact, that the temperature of the northern hemisphere, since last Autumn, has been higher than for many years before. On the banks of the Ohio almost every month of the winter was so mild as to excite a constant anticipation of a cold and inclement spring. March and April, however, have passed away without even their ordinary rigors; and vegetation has been unfolded a fortnight or more in advance of the usual periods. In February and March there was so much rain as to cause a great swell in the Ohio river, but the temperature still remained genial. So little ice formed below the latitude of 41°, that it was imported from the upper Mississippi, even into Cincinnati.

Notwithstanding this high and equable winter temperature, we learn that in many parts of the West a dangerous pulmonary inflammation prevailed, accompanied in some cases with a typhoid, and in others with a congestive type of fever; bringing up in the minds of the older members of the profession, recollections of the pneumonia typhoides of 1812–14. In some places this pneumonitis or bronchitis combined

itself with scarlatina, constituting a very dangerous complication. In other cases a fever occurred, without the local affections characteristic of the diseases just named. Within the last two months measles have prevailed in a number of places, being in general uncommonly mild.

The object of this article is not, however, to give an account of the weather and diseases of the last few months; but to direct the attention of our brethren in the valley of the Mississippi, to the importance of making a full and permanent record of the diseases of the remarkable climatorial period through which we have just past, inasmuch as another of the same kind may not occur again for a long time. We shall be happy to receive and publish their observations.

D.

PROGRESS OF TOTAL ABSTINENCE.

We have lately made personal observations on the progress of the Temperance Reform from St. Louis, Missouri, to Chillicothe, Ohio, and are enabled to state that an extraordinary reduction in the use of intoxicating drinks has taken place within the last six months. Temperate drinkers have ceased to indulge themselves, and a vast number of habitual drunkards have suddenly broken off, and joined in the crusade against the use of alcohol. No class of men should experience more gratification at this reform than physicians, but we should not content ourselves with the happiness common to all benevolent men, when the sudden abandonment of a habit which all the world has regarded as pernicious to health, affords an admirable opportunity of studying its effects. We would then seriously urge on our readers, first, to note carefully the effects on health and constitution, of a sudden discontinuance of alcoholic drinks, previously taken to excess; second, to observe hereafter what diseases may disappear, in consequence of the diminution in the consumption of strong drinks.

D.

THE SANICULA MARILANDICA A CURE FOR THE BITE OF A SNAKE.

Some years since we received from Mr. J. F. Hamtramck of Missouri, an imperfect specimen of a plant said to be an efficacious remedy for snake-bite. On submitting it, a short time since, to Profes-

sor Short, whose knowledge of the botany of the central parts of the United States is most full and accurate, he decided that it was the *Sanicula Marilandica.* The following is a copy of the note which accompanied the specimen:—

"The root is the part employed as containing the medicinal qualities, and is used in three different ways; most generally the Indians carry the root about them in its natural dried state, and to apply it, masticate it sufficiently to form a full cataplasm, which they bind immediately over the wound. Others, again, pulverize the dried root, and carry it about them in a leathern pouch; when it is to be applied, it is previously moistened. Others, lastly, use it in its green state, in which case it is bruised into a mass. They always scarify the wound previous to the application. During a hunting tour through the upper part of Texas, which I took with the Osage nation in the fall of 1828, an Indian girl was bitten, as I was told, about 12 o'clock, while searching along a small stream for fire wood. We were encamped, and all the Indians out on the hunt. About an hour before sunset I got into camp, and was informed of the misfortune of the poor girl. On visiting her, I found her leg swollen to more than twice its usual size (she had been bitten on the outside of the leg, about midway between the knee and ankle), and she was apparently suffering the most excruciating agony. On the arrival of the first person from the hunt who had any of the root with him, we set about masticating it, while an old woman scarified the wound with the point of a butcher-knife, which the poor girl seemed not to feel in the least. A good large poultice was applied about dark; on the next morning, the swelling had entirely subsided, and the girl travelled on foot, from before day light, till at least 12 o'clock." D.

OPERATION FOR CLUB FOOT.

The communication from Samuel Silsbee, M. D., of Cincinnati, of which the following is an extract, would have been noticed some time since, but that it was mislaid. The Doctor was himself the subject of the operation—his age about 24 years.

"On the 22nd of February, 1840, the tendo Achilles was divided with but little pain, and the loss of a single drop of blood; and the

foot was placed immediately in a state of extension. On the 25th it was found necessary to divide the plantar fascia, which was done, but unlike the former operation, was attended with the most acute pain. On the 27th, scarcely more than a scar was visible of the operation. I was confined to my couch, and my whole time and that of many interested friends, was occupied in manipulating with the foot by frictions, extensions, emollients, &c. The progress we made was almost incredible, and such was the reproductive powers of nature, under a careful system of dietetics, conjoined with youth and good health, that about the 28th of March, the divided extremities of the tendon had reunited by new substance to the distance of $1\frac{1}{2}$ inches, and in such a perfect manner that the point of division could not be distinguished. But in the progress of extension we were obliged to break the newly formed tendon. In seven weeks from the time of operation, the plantar surface of the foot could nearly be placed upon the floor; and in ten weeks the foot was placed in a straight leather boot, with stiff back, and straps to keep it in a state of extension, which apparatus, with some modifications, I have retained ever since.

When in this boot, I commenced using my foot; but for the first two months, I suffered most infinite torture from the pressure upon the phalangeal extremities of the metatarsal bones. This I presume time will obviate; in fact it has been much palliated by making holes in the sole of the boot, and by the free use of padding.

I also found, in spite of all the ingeniously contrived inventions upon which I spent much time, and no little money, including many of those most approved by eminent surgeons, exhausting my own patience and that of my workmen, that so much force was continually required to keep the foot in position, and such unequal pressure was unavoidably made on various points, as to keep me in a constant state of annoyance, amounting at times to actual suffering. From the same cause the development of the foot (if it were so inclined) was prevented. But the most unpleasant result of my experiment which I had to contemplate, was, that as my foot increased in strength (which it did, so much so that I limped along slowly, but without pain), my ankle grew stiff and immovable, in spite of warm baths, frictions, constant use, &c. This then was my condition 9 months after the operation, previous to which I was able to compete with any of my age in pedestrianism, and as far as my *foot* was concerned, equalled in agility most of my fellows. Now to whom, or to what can this failure be at-

tributed? I cannot, nor will any one, ascribe it to inattention, ignorance, or mismanagement on my part, for surely none could feel more personally interested in a favorable result than myself, and few operations commenced under more auspicious circumstances than did mine. That it is a *failure*, however, no one who sees my diminutive, misshapen libel upon a legitimate foot, and witnesses my decrepit progression, can for a moment doubt." D.

FRENCH MEASLES.

We extract from the letter of A. B. Price, M. D., of Centreville, Ohio, dated April 25, 1842, the following notice:

"I have nothing of much interest to communicate, except that the Dengue (or as it is termed in common parlance, French Measles,) prevails to a considerable extent in this section of country. It is mostly a mild exanthematous disease. One case which occurred a few days ago, was attended with excruciating pain in the left foot and ankle, slight swelling, but no discoloration. The skin was so sensitive that the least touch of the part caused the patient to cry out. Before the eruption appeared, the pain extended to the knee and back; the pulse was not much affected, nor was there much febrile movement. The eruption comes out freely, about the third or fourth day; there is no affection of the throat, nor cough; eyes slightly inflamed; pulse but moderately accelerated; skin hot; head-ache; tongue only slightly furred; some thirst; restlessness, chilliness, and flying pains through the back and legs. Such are the symptoms of this singular epidemic; it attacks those who have had the measles, as well as those who have not. It has been almost confined to the young—appears to be contagious—treatment simple—unattended by danger."

D.

DRY GANGRENE.

The letter from which we cut the above, has the following paragraph. In due time we shall publish the result of the case.

"I have a case of dry gangrene, subject 83 years old, remarkably temperate and robust, was never sick; the disease began in August,

has extended nearly to the knee, and is now separating from the sound flesh; with a little assistance nature now may perform a cure. I think the leg may be removed soon; he has taken no medicine of any moment for three months, until lately, and is now on a tonic course."

D.

FLOWERS OF SULPHUR AND CREAM OF TARTAR AND MAGNESIA IN DYSENTERY.

Dr. Wm. Sherer, of Meade County, Kentucky, during the past summer and autumn, was induced to try the effect of this compound in a dysentery which prevailed in his neighborhood. He used equal parts of those medicines, mixed with cream, to the consistence of thin custard, of which he gave a desert spoonful every hour. After narrating the history of the first case, in which he he employed this mixture, he goes on to say:—

"I subsequently treated, with complete success, all the cases of dysentery to which I was called, (and I had some 15 or 20) in a similar manner, without giving any mercurial purges, except in one or two cases, where the tongue, by its smooth, dry, and glossy appearance, indicated a suspension of the secretions of the mucous membrane. In these cases, a few pills of blue mass restored the secretions to a healthy condition. I am inclined therefore to the belief that mercurial cathartics are not only unnecessary, in the treatment of dysentery, but perhaps injurious, except probably in those cases where the biliary organs are considerably deranged, which, by the bye, so far as my observations extend, is not very common. The localities in which the dysentery prevailed, were identical with those in which the bilious and congestive fevers also prevailed. It not unfrequently happened that different individuals of the same family would be attacked at the same time, some with dysentery, and others with bilious fever."

D.

COLD DASH IN THE ASPHYXIA OF INFANTS.

Dr. Sherer, from whose letter we have just quoted, has on the same sheet furnished us with the following fact:—

"A negro woman whom I lately attended, had a pelvis so narrow in proportion to the size of the head of the fœtus, that the latter was a long

time in passing the straits, and when delivered was elongated to an extraordinary degree. Respiration did not commence, and all the usual means were employed without effect, except that a slight muscular contraction was once observed. At this moment one of the attendants (all of whom were of the Catholic faith), performed the baptismal rite; and in the hurry of the occasion the water was very profusely applied to the head and breast of the child. In less than half a minute it began to cry, and has ever since remained healthy."

For many years we have been in the habit of applying cold water, suddenly and with force, to the chests of new-born infants, when they were perfectly or partially asphyxiated, and regard it as superior to every other means of resuscitation. D.

LEADEN CANULA IN THE TREATMENT OF FISTULA IN ANO.

Dr. J. W. Letton, of Lexington, Mo., has given us the history of fistula in ano, successfully treated by the introduction of a leaden tube. The purulent discharge from the bowels was profuse; and the cavity on the outside was several inches deep. At the suggestion of Dr. Ward, a leaden canula, three and a half inches long and two lines in diameter, was introduced and maintained in its position by a T bandage. The purulent discharge rapidly declined, granulations quickly began to fill up the bottom of the cavity, a frequent shortening of the tube became necessary, and in 10 days, it was finally withdrawn, the fistula not being more than half an inch deep. Cicatrization soon followed, and the cure was perfect and permanent.

D.

LISTON'S ELEMENTS OF SURGERY—NEW EDITION.

Messrs. Barrington & Haswell, Philadelphia, have in press a new edition of that deservedly popular book, Liston's Elements of Surgery, with notes and additions by Dr. Gross, the accomplished Professor of Surgery in the Louisville Medical Institute. The work will be illustrated by numerous wood-cuts, and be comprised in an octavo volume of five or six hundred pages. It will appear early in June, when we shall take occasion to speak of it more fully. C.

NEW WORKS ON BOTANY.

We learn from a late number of the New York Medical Gazette, that the second part of the *Flora of North America*, by Drs. Torrey and Gray, was published on the first of April. The same Journal states that a new *Botanical Text-Book*, from the pen of Dr. Gray, will appear early in the present month. It will treat briefly of the structure and physiology of plants, the natural families of the vegetable kingdom, and contain a list of the principal plants used in medicine and the arts. The author's enviable reputation as a man of science, is a guarantee for the excellency of the forth-coming work. The Gazette says:

"This work will be of great value to those medical students who desire to gain a knowledge of botany, and we rejoice to say that the number of such is daily increasing. Indeed, we believe that the chief reason why botany has been so much neglected by the profession in our country, is, that the means of studying it scientifically have not been afforded them; the only text books within reach of the student, being of a character to disgust him with a branch of natural science, which, if properly presented to his view, could not but prove as eminently attractive as it is practically useful. This great difficulty will now be removed. Dr. Gray is well known, both in this country and abroad, as a man of true science, and we are rejoiced that a gentleman who has shown, by previous publications, that he is capable of *higher things*, has consented to prepare a text book of his favorite science. We bespeak for his work the favor of his profession. We have no doubt that it will be generally used in our medical institutions. We would suggest to those of our brethren who have a voice in the control of schools, academies, and other literary institutions, that they will do science a service by introducing Dr. Gray's Text Book."

C.

CORRECTION.

In page 12 of the list of graduates of the Medical Institute of Louisville in our last number, for ANDREW P. PRICE of Circleville, O., read ANDREW B. PRICE, of Centreville, O.

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ART. I.—*Observations on the epidemic Yellow Fever of Natchez, and of the South-west.* By JOHN W. MONETTE, M. D., of Washington, Mississippi.

(*Continued.*)

EPIDEMIC YELLOW FEVER AS IT PREVAILED IN THE SOUTHWEST IN THE SUMMER AND AUTUMN OF 1839.

9. *Alexandria.* This town is situated on the south bank of Red River, just below the rapids, and about 365 miles by the river from New Orleans, or a run of 48 hours by the steam packets. It is the head of steamboat navigation on the lower Red River, during low stages of water. The population generally amounts to about one thousand souls.

The health of this place had never been more uninterrupted in the summer season, than it was for three weeks after yellow fever had been epidemic in New Orleans. The regular steam packets made each their regular weekly trips to and from New Orleans. When the stage of the river admitted the passage

of a steamboat over the rapids, they ascended as far as Natchitoches.

The health of the bayou settlements south and east, at the distance of a few miles, was partially interrupted by a few cases of bilious fever. Yet Alexandria continued quite healthy until after nearly a dozen cases of yellow-fever had been introduced by steamboats from New Orleans; besides a number of other persons, who arrived in the meantime, from the same port, apparently in perfect health, and who were soon afterwards attacked by the same disease.

The weather about Alexandria, as well as in all the southwest, had been dry and very hot for weeks together. About the last of July the newspapers of that place complain that "the air at times was almost insupportable"; and that "the town was dry, dull, and healthy," with the mercury in the thermometer ranging from 84° to 92° daily. Such was the state of things in Alexandria when the epidemic was making its first advances in New Orleans; and in a few days more, the atmosphere would have been sufficiently infected to have generated an epidemic there, it being then the head of steamboat navigation from New Orleans, and the point of disembarkation for the swarms of Texian emigrants. An unusual rise or flood in Red River, at this critical juncture, postponed the epidemic for nearly six weeks. Red River continued in flood more or less until late in August, so as to admit the passage of steamboats for that length of time, over the rapids, as far as Natchitoches and farther. That place immediately became the principal destination of the steamboat trade; and Alexandria for the time was relieved of the swarms of emigrants daily ascending to upper Red River and to Texas, as well as of large quantities of freight and goods from the infected district of New Orleans.

So soon as the river subsided to a low stage again, and the rapids were impassable, Alexandria again became the head of steamboat navigation from New Orleans, about the last of August. It was a second time the depot for all the passengers, emigrants, and freight of every kind, shipped for the upper Red

River country. At this time, early in September, the epidemic in New Orleans was beginning to sweep off its scores every day; and every steamboat which arrived at Alexandria introduced more or less *fomites*, besides occasional cases of open yellow-fever, and many persons with the infection dormant in their systems. Cases of yellow fever immediately began to manifest themselves in that part of the town near the river, and in boarding-houses near the steamboat landings. By the 20th of September yellow fever was epidemic in the place; and it prevailed over the whole town before the first of October, although the majority of the people had fled to the country. So strongly infected was the local atmosphere of the place, that several persons from the country, who imprudently visited the town at that time, contracted the disease several days afterwards, and died in the country.

The disease was checked by the cold weather about the first of November, after *one hundred and five souls* had perished. Of these only six were females. The majority of all the deaths and cases occurred among emigrants, boatmen, or transient persons, principally from New Orleans.

Dr. Jackson of Alexandria, and other intelligent gentlemen, assured me that there was not a case of yellow fever in that place until it was introduced by the steamboats from New Orleans. Among the first cases were the engineer of the Houma and some of the crews attached to the Velocipede and Washington steam packets, which run regularly in that trade. The disease first spread from the common boarding houses, where the engineer and other hands of those packets had been left for medical attendance. Those who kept the houses were among the early subjects of the disease.

10. *Natchitoches.* The cases at this place were comparatively few, and were altogether in those who had arrived from New Orleans with the infection in their systems, or were open cases of fever discharged from the boats. These occurred also before the last of August, while the river admitted steamboats over the rapids, and while the epidemic in New Orleans had not reached its greatest degree of virulence. The fall in

the river, very opportunely, as the epidemic in New Orleans was approaching its most malignant grade, cut off further intercourse, and this preserved Natchitoches from a fatal epidemic. The Washington packet in her last trip left several persons sick of yellow fever at Natchitoches, who afterwards died. Natchitoches is 150 miles by the river above Alexandria, on the south-west bank of Red River, upon fine ancient alluvion, skirted by rolling pine uplands in the rear; population about 500.

I have not been able to learn that Natchitoches has ever been visited with epidemic yellow fever, as the rapids near Alexandria serve as an excellent natural quarantine ground, during the epidemics in New Orleans.

Having finished our notice of the river towns in which yellow fever prevailed in the autumn of 1839, we will proceed to note a few other points in Louisiana, upon the bayous south of Red River. In several towns of this region, likewise, yellow fever was introduced from New Orleans by steamboats. We desire the reader to bear in mind, that our steamers pass from New Orleans to the distance of 400 miles and return every week; and where the distance is much less, they perform their trips every three or four days. As yellow fever infection lays dormant in the system from three to nine days, before it manifests itself in open disease, persons may travel on steamboats to the distance of 300 and even 500 miles, in perfect health, after they have contracted the disease. If the distance is less they may arrive at their destination several days before the disease developes itself in their systems. There is no part of the southwestern settlements of Louisiana which is more than 250 miles from New Orleans, by the steamboat route; of course the trip to and from the city is performed every week at most, when the business is profitable. At the outbreak of an epidemic in the city thousands of persons leave it within the first three weeks, and disperse through the numerous inland towns within one hundred and fifty miles direct from the city. These points they reach on steamboats in 24 or 36 hours. Under the excitement of anx-

iety, alarm, and apprehension, the equable condition of the system is disturbed, and many are attacked soon after they reach their destined asylum. Those towns to which many persons, with their families, clothing, bedding, and the like, resort, are greatly exposed to the danger of an epidemic; and especially if the condition of the general atmosphere be favorable to its dissemination. In this manner the yellow-fever was introduced into the following towns in the autumn of 1839:—viz., Thibedeauxville, Franklin, New Iberia, St. Martinsville, and Oppelousas.

1. *Thibedeauxville* is situated on the south side of the Lafourche, about forty miles from its efflux at Donaldsonville, and 125 miles, by steamboat route, from New Orleans. The population is about 300 souls, chiefly Creole French, and some Americans, and transient persons. In low stages of the Mississippi, steamboats cannot pass from the river into the Lafourche, on account of the shoal bottom for several miles of its upper course. At such times the small steamboats which remain in the Lafourche, run regularly from the upper to the lower settlements, a distance of about 100 miles. Donaldsonville then is the depot for the freight and passengers from New Orleans for the Lafourche, and is connected with the Lafourche line of boats by a portage of a few miles. Thibedeauxville is the central town for these settlements, and a regular landing point for steamboats.

In this place the population enjoyed uninterrupted health, in the fall of 1839, until many persons arrived from New Orleans, towards the last of August, for retirement from the epidemic. The *first five or six cases of yellow fever* were unquestionably in persons recently from that city; and none pretend to question the fact, that these cases were introduced from New Orleans. Cases occurred subsequently during the month of September, until the whole number was about *twenty-five*. Some of the latter could not be traced to New Orleans, but to infection or *fomites* introduced from that city. The disease did not prevail as an epidemic, for the greater number of cases were contracted in New Orleans.

Mr. W. B. Shields, an intelligent planter in that region, assures me of these facts. The number of deaths in this town was about fifteen.

2. *Franklin.* This town, like the last, is situated on high alluvion, on the Teche, at the head of steamboat navigation in low stages of the river. The distance from New Orleans by the steamboat route, is about 250 miles. There is also a more direct route in high stages of the river. The trade by steamboats with New Orleans continues all the year. Population 250.

This town, like all the interior towns, was uncommonly healthy during the summer until after yellow fever had become epidemic in New Orleans, and many persons flying from that disease, had arrived from the city about the first of September. In addition to which, in the first week of September, a steamboat arrived from New Orleans with many persons on board, several of whom were attacked soon afterwards with yellow fever, besides *two cases* which developed themselves on the way, one of which died before the boat reached Franklin. This boat proved to be infected; for several persons died who had not been exposed to any other source of infection, and who were attacked with yellow fever a few days after having made a visit to this boat. The clerk of the Parish court was one of them. In less than a week after this boat arrived at the landing, several persons in that immediate vicinity took the disease and also died. The disease was considered epidemic after the 15th of September, and did not cease until checked by frost early in November. The number of deaths in the village and vicinity, was about 25; the whole number of cases about 45.

3. *New Iberia.* This town, like the last, is situated on the Teche, and upon high ancient alluvion, about 30 miles above Franklin, and at the head of low tide-water. The population is about 160.

This village continued very healthy until about the 10th of September, when cases of yellow fever began to present themselves in the persons of those who had recently arrived from New

Orleans, by way of the Plaquemines. Such were the first cases of yellow fever in New Iberia, in 1839. I am not apprised that the disease was ever there before.

Soon after the first cases of this kind, the disease began to spread among those of the place who had been exposed to no other source of infection than the steamboats, the sick, and the *fomites* imported in those boats. The whole number of *deaths*, in and near this town, was about *twenty*. For the facts I am indebted to the Hon. B. G. Tenney, and other intelligent men.

4. *St. Martinsville* is also on the Teche, and about 80 miles by the bayou above Franklin. This village has been noted for its general salubrity, and yellow fever was unknown there until 1839. Several cases occurred, as was the case at Natchitoches, in persons who had arrived from New Orleans; but being in a great measure cut off from a continued supply of cases and *fomites*, by low water, it did not become epidemic in this village.

5. *Oppelousas* is a small, scattered village, situated in a rolling prairie, proverbial for health, and remote from all those causes which are said to generate yellow-fever miasm. It is remote from any navigable stream, and the nearest steamboat landing is nearly six miles distant. With this point, however, the village has direct and constant intercourse by a regular line of daily stages; and thus a direct communication is kept up from New Orleans to Oppelousas. The route between the two points is made in less than 48 hours: a boat may leave New Orleans, loaded with freight and passengers, together with yellow-fever *fomites*, and in 48 hours one half of the whole cargo, and all the passengers, may be in Oppelousas. The intercourse is not discontinued during the whole year; and previous to the experience of 1839, it was supposed, even by those who were well convinced of the importable nature of the disease, that the interruption in the route by a land portage of six miles, was a sufficient guaranty of safety.

This village has long been a resort for many of the inhabitants of New Orleans, when compelled by the epidemic to re-

tire from the city; and in no case have I been able to learn that yellow fever has been ever communicated in its epidemic form, to the inhabitants, until the autumn of 1839. This year the health of the place was uninterrupted, until the first of September, when cases of this disease began to manifest themselves in the persons of those who had recently arrived from New Orleans. For ten days it was confined exclusively to the people of New Orleans, and those recently returned from that city, with whom the village was thronged. Cases multiplied daily, and by the middle of September it was considered as epidemic, when most of the people deserted the place. The disease was epidemic until November, when the number of deaths had increased to *forty-seven*, of whom seventeen were natives of the place.

An infected atmosphere was created, and *first*, especially in some houses where cases had occurred. Some persons from the country, in perfect health, contracted the disease and died after having made a short visit to those houses, supposed to be infected.

Nor was the dissemination of yellow fever from New Orleans, restricted to the inland towns of Louisiana and Mississippi. It was carried likewise to Texas. The principal port of Texas is Galveston, about 500 miles by the sea route from New Orleans. This route is made by the regular packet steamboats in less than 60 hours. Thus, in two days and a half, a steamboat loaded with freight and passengers from the infected port of New Orleans, will be discharging the same at the wharves of Galveston. This kind of intercourse is almost daily during the whole business season. From Galveston to Houston is a drive of eight hours by the stage; and the intercourse is direct and uninterrupted. The port of Galveston has little or no direct trade with any foreign port except New Orleans—it is situated upon an island of sand and of course not in a miasmatic atmosphere, according to the common doctrine. Yet it did become infected with yellow fever as an epidemic, and many lives were lost. Others died with yellow fever at Houston, who left New Orleans only S

or 10 days before. Galveston received the seeds of the disease from New Orleans, and from New Orleans alone. I am well aware that the Galveston epidemic has been ascribed to the magic influence of marsh miasm, city filth, and impure wharves. It began about the wharves and shipping, we admit, as it does at every port.

If we examine into the circumstances of its prevalence on the northern coast of the Mexican Gulf, from New Orleans eastward to St. Augustine, and even to Charleston, we shall find abundant reason to infer that in the more important ports, yellow fever was introduced from Havana, Vera Cruz and other ports in the West Indies; while in the smaller trading towns it was introduced from New Orleans, Mobile and Charleston. All the commercial ports suffered from the disease in direct proportion to the amount of direct trade with the West Indies, and the smaller towns suffered in due proportion to the direct intercourse with these infected ports of the United States. Other towns, whose latitude and situation, according to the common views of the yellow-fever miasm, would be most exposed to this disease, were entirely free from it, when their intercourse was cut off with the infected ports.

1. *Bay of St. Louis.* This is a small village situated upon the bay of that name, about 60 miles east of New Orleans. This village is entirely without commerce or intercourse with any foreign port, and is made up chiefly of cottages and villas occupied by wealthy families from New Orleans in time of epidemic yellow fever, and at other times as a pleasant summer retreat from the heat and crowded population of the city. The site was chosen for this purpose as one peculiarly free from all the usual sources of disease of all kinds. It is upon a flat sand beach remote from marsh vapors and exhalation, and has always been considered as remarkable for health, and as such, has been a frequent resort for invalids from the interior of Louisiana and Mississippi. The cottages and villas are extremely neat and airy, spread chiefly in one range of buildings at the distance of nearly fifty yards from

each other. Besides these there is an extensive hotel for the accommodation of those who have no permanent provision for a residence. There is one steamboat wharf, but no trade or commercial intercourse with any port except New Orleans, and of course none of the usual accumulations of city filth.

Yet when this village has been much frequented and thronged by individuals and families from New Orleans, with constant intercourse by steamboats with the city during the epidemic, it has been repeatedly visited also with yellow-fever cases; and occasionally an infected atmosphere has been generated in one or more houses, from which the disease has been occasionally propagated to those who had been exposed to no other source of infection; and the people have been compelled once or twice to desert the place for safety. The first cases of yellow fever at any time occurring here, have been unquestionably those who had retired from the epidemic in New Orleans or Mobile. In 1839 there was a number of such cases here; but an infected atmosphere was not generated which would produce the disease in those who had been free from any other exposure. What local accumulations of filth, or what marshes are here to generate yellow-fever miasm?

2. *The Bay of Biloxi* is about 30 miles further east, and about 50 miles west of Mobile Bay. It is situated upon the margin of the sea, and like the last, is formed chiefly by about 30 cottages and elegant villas, strung along the beach for several hundred yards. This place is one of common retreat for the two cities of Mobile and New Orleans during their epidemic visitations. Scarcely a season passes, in epidemic years, without several cases of yellow fever, developed in those who arrived apparently in perfect health from one of these infected cities. Yet, like St. Louis, it has been mostly free from an epidemic form of disease. The simple reason for this is, that the local atmosphere in these places is not sufficiently contaminated by a crowded population to form a suitable nidus for the reception of the infection or *fomites*. These facts are given upon the authority of G. L. C. Davis, Esq., an old resident of New Orleans familiar with these pla-

ces, and it is corroborated by the authority of hundreds. In 1839 seven cases of yellow fever occurred at Belman's Hotel near the steamboat wharf, and the local atmosphere of the Hotel became infected, as was evident to all interested. Several persons contracted the disease from that house.

3. *Mobile City.* This city has an extensive commercial intercourse with the West Indies and other parts of the world. The direct intercourse between Mobile and tropical ports is no more restricted than that of New Orleans, except in point of commercial importance. Besides this it has constant intercourse by steamboats and sea vessels with New Orleans. Owing to its own direct trade with the West Indies, it becomes infected with yellow fever almost simultaneously with New Orleans, while those towns which derive their infection from either, or both, are not visited by the disease epidemically for several weeks after it has prevailed in one or both of these cities. The disease in Mobile is no less fatal than it is in New Orleans. The average mortality in both is at least *one-third* of the whole number of cases; whereas in inland towns the mortality seldom falls short of *one half*, notwithstanding the assertions of some men to the contrary.

The disease in 1839 made its appearance among the shipping at Mobile, simultaneously with the same disease in New Orleans. In both places, the first cases were among the shipping exclusively, or among those who had frequented certain vessels. At Mobile the disease was advancing *pari passu* with that in New Orleans until the 20th of August, when a south wind sprung up for several days, and the disease, for a while, appeared to be arrested. But by the *third* of September it began to spread with great virulence, and extended to the inhabitants of the city. It continued to spread among them for nearly six weeks, with great mortality, until the 20th of October, when it began to abate after a strong wind and change of weather. On the first of November the disease was considered extinct. The total number of deaths was about 650—of these, 147 died in August, 383 in September, and 120 in October. On the first and second days of September there were 22 deaths; and 127 in the *next seven* days.

4. *Pensacola* is situated upon a bay of the same name, about 20 miles east of Mobile, and nearly in the same latitude; but having no West India commerce, it escaped yellow fever. Although this town had suffered severely in former years, from epidemic yellow fever, yet in 1839, when every commercial port was ravaged by that pestilence, Pensacola escaped. Why was Pensacola exempt? Its population was far more numerous than many towns of Louisiana which suffered severely; it is in the same latitude of towns infected, and as far south as Mobile. Why then did it escape, if yellow fever be endemic on this coast? We answer, that Pensacola escaped yellow fever this year, simply because it was not introduced there as it had been in other towns and ports. Pensacola was not crowded with persons who had already imbibed the infection; the town, the stores, and houses, were not filled with goods, clothing, beds and the like from infected towns or ports; it did not carry on a free and extensive commerce with infected ports of the West Indies, with arrivals almost daily of ship-loads of infected air from Havana and Vera Cruz. The streets were not thronged with raw Europeans or unacclimated strangers. These are the negative causes of her exemption.

Pensacola is a naval station, and during the summer and autumn of 1839, the harbor contained a large number of vessels of war, with their complement of sailors and marines. During the greater part of this time, there were at least 30 vessels of war, with their aggregate complements of 3500 men, besides the ordinary population of the place, giving an aggregate of at least 5000 souls.* Yet on the 31st of August, at the very time when yellow fever was ravaging New Orleans and Mobile, the whole population of Pensacola, including the fleets, was perfectly healthy.

During the epidemic season the United States squadron lost five men by yellow fever, having contracted the infection before entering the harbor. The French frigate La Gloiré, en-

*See Pensacola Gazette, Aug. 31.

tered the harbor with twenty cases of yellow fever on board. Due precaution was taken to prevent intercourse with the population of the town; the frigate was anchored out in the bay, and the sick were carried to the Navy Hospital, for medical aid. The disease was circumvented and it disappeared.

The French frigate had not become infected, as the air on board had not been contaminated with the infected air of the West India ports, by lying for weeks at the wharves, as merchant vessels do; the men had contracted the disease by going ashore at such places, and the vessel was prevented from being infected by the early removal of the sick to the naval hospital. The disease did not spread at the hospital, because, as we have before remarked, the air in a hospital is not prepared for the dissemination of the disease, like the air of a crowded town or city. The restricted intercourse between the population and the naval forces, prevented the extension of the disease in the town.

The first epidemic in Pensacola, after it passed into the possession of the United States, was in the summer of 1822, or one year after it had ravaged St. Augustine. Up to that period it had been remarkable as a place of extraordinary salubrity. But immediately after the influx of northern emigrants, a trade sprung up between this town and the West Indies, and the yellow fever was introduced. Mr. Williams narrates the facts, and after yielding to the vulgar prejudice, in admitting that it was partly caused by filth and putrescent matters near the harbor, he proceeds to say: "*the pestilence spread like wild-fire*, immediately after the distribution among the huckster shops of the cargo of spoiled fish which *arrived from Cuba*, sweeping whole families, and often whole streets, in one general destruction." The mortality, he informs us, was altogether among the recent population; "for *none of the old inhabitants* were afflicted with the pestilence."*

Here it would appear evident that the active poison which produced the epidemic was certainly brought *from Cuba*, even

* Williams' Florida, pp. 15, 16.

if it were in the "*spoiled codfish.*" Like most other cases of a similar nature, it is likely that the codfish were distributed, sold and eaten, without any discovery of their spoiled condition, until after the close of the epidemic, when probably this plausible conclusion was arrived at. Every shop-keeper who supplied himself with these fish, doubtless *visited the vessel*, and contracted the disease in person, from the infected vessel.

How was it in 1825? Pensacola was thronged with northern adventurers, with trading vessels, and numerous importations for the new settlements, and yellow fever was introduced and prevailed with most destructive mortality. Hence there is nothing in the situation or location of Pensacola, which renders it more exempt from, or more liable to yellow fever, than any other town, under the same contingent circumstances.

The *first* epidemic yellow fever on record at Pensacola, was in 1765, at the close of the French and Spanish war, immediately after a British garrison had taken possession of the province of Florida. "A regiment of soldiers was sent from England to Pensacola, during a very hot summer. On their arrival they were confined day and night within the walls of the fort at Barrancas, which excluded the sea-breeze. They soon became infected with malignant fever, which proved very fatal to the common soldiers."* This epidemic was thus introduced by way of the West Indies, where all the troops of Great Britain were obliged to pass on their destined route. These troops, chiefly fresh from England, with their European constitutions and habits, were brought through the West Indies to Florida, at the very time when yellow fever was epidemic in those seas. They were quartered in a confined fort during the most oppressive heats of summer, under all the circumstances calculated to generate infectious air. This was soon accomplished; and the introduction of supplies of clothing, arms, &c., from the West Indies, furnished them with the active cause of disease, if they did not bring it with them on their first arrival. Those troops in the port, which had no commu-

* Williams' Florida, p. 15.

nication with the garrison in the Barrancas, continued to enjoy perfect health.

Let us inquire into a few other points along the northern shore of the Mexican Gulf. We find Mobile, a commercial city, desolated with yellow fever. At the next bay only 60 miles distant, Pensacola, *not a trading town*, but having at least 3500 men in the harbor, besides her own population, enirely escapes disease; and although twenty-five cases were introduced into the open suburbs of the town, no epidemic supervenes. A little further east, we find the little port of *St. Joseph's*, where a lively trade had sprung up a year or two previously for the new settlements on the lower Apalachicola, with direct intercourse with New Orleans and Mobile, as well as with the West Indies, ravaged by the same pestilence which was then prevailing in those ports. A little further east and south, on the western side of the peninsula of Florida, is Tampa Bay. This point, also, within the last two years had attracted a smart trading intercourse from the same ports, and after the Seminoles had been driven back, was thronged with settlers and adventurers. This place too became infected, and many of its inhabitants died. Other points were visited in the same manner.

St. Augustine, on the eastern side of East Florida, had been proverbial for health during the Spanish regimé, and was never visited with yellow fever until it came under the jurisdiction of the United States. But in the autumn of 1821, having become thronged with northern emigrants and unacclimated adventurers (and mainly on account of its proverbial salubrity), it was suddenly visited by a most fatal epidemic, which swept off a large proportion of all who were attacked.

In 1839, the population of this town was quite healthy until about the middle of August, when yellow fever of a very mild character prevailed to a considerable extent. The place labored under this epidemic from the middle of August until the 12th of November. During this time, out of *seven hundred cases*, only about *fifty* died—or *one* in *fourteen!!* Most cases yielded readily to a judicious mode of treatment. *Yellow fever* never has prevailed epidemically in the United

States, I am persuaded, where there were *more than two recoveries to one death*, including all the genuine cases of yellow fever.

In 1839, I am strongly inclined to think, that St. Augustine was visited with epidemic *bilious* fever, besides a few cases, comparatively, of yellow fever, which may have been communicated from the shipping to those who visited their holds and cabins.

In regard to St. Augustine, the *first epidemic yellow fever* occurred under circumstances similar to those which attended the first epidemic in the Barrancas at Pensacola, viz.: the change of regimé. In the latter it broke out upon the occupancy of the place by British troops by way of the West Indies; in the former, or St. Augustine, it broke out soon after the place became occupied by the United States. Mr. Williams * states that "in 1821 St. Augustine was visited with yellow fever. It broke out in several buildings situated in the back part of the city, which had been for a long time closed up, their owners having retired to Havana. On the cession of the country to the United States, a *sudden increase of population* caused these houses to be thrown open and *rented to strangers.* One of them was rented to several American officers, and three of them fell immediate victims to the fatal disease. *In some cases the sickness commenced in vessels lying in the harbor*, which had brought fruit *from Cuba. One of these, on the voyage, had lost the captain and most of the crew by sickness. Some early cases of fever were traced to other vessels.* . . . . Since that period St. Augustine has been distinguished as one of *the most healthy spots in the United States.*" This is a simple, unvarnished narrative, unswayed by prejudice or theory, giving the facts without comment.

6. *Savannah*, the principal commercial port of Georgia, is liable to frequent visitations of epidemic yellow fever. In 1839, the population of the city was uncommonly healthy for at least three weeks after cases of yellow fever began to appear.

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* Williams' Florida.

We do not design to trace the origin and spread of the epidemic in Savannah, but merely to note the fact, and refer to the circumstance of its appearance among the vessels in the port, several weeks before it became epidemic in the city. The intelligent reader who has perused the previous pages, on the importable character of this disease, can make his own inferences. It first spread from the shipping to the population near the wharves.

7. *Charleston, S. C.*, has been an important commercial port from the earliest settlement under the British Crown. The first epidemic yellow fever in this place, was in the autumn of 1700. It likewise prevailed again in the years 1732, '39, '45, '48, and '92. In more recent times it has been visited occasionally with this epidemic, in its most malignant form. And it is clearly proven by the records of the times, that there have been occasionally cases among the vessels in port, when no epidemic supervened.

We propose briefly to examine the circumstances connected with the prevalence of yellow fever in this city in the fall of 1839, and its *subsequent appearance* at Augusta in the interior of Georgia.

The newspapers represent Charleston as having been remarkably healthy until the first of July. A few cases of yellow fever had occurred among the shipping in port soon after the middle of June; and cases from the vessels were received into the marine hospital on the 25th and 26th of June,* at which time cases were frcquent among the shipping. The Charleston Courier, of the 24th of June, 1839, says up to that time, "the cases of yellow fever were few in number, and *confined exclusively to a few vessels* in our harbor, and to *seamen on board those vessels;*" again, "*not a single case had occurred on shore.*" The same paper again declares, that, up to the 24th of June (1839), "among the vast number of *persons now in our city*, liable to yellow fever, *not a landsman has been*

* See Dr. Strobel's Report as Physician to the Marine Hospital. See also the Charleston Courier and New Orleans Bulletin.

attacked by it." The number of cases began to increase daily among the shipping, and chiefly among the crews who were unacclimated. During this time the papers of Charleston continued to repudiate the doctrine which admits the possibility of yellow fever being in any case contagious, or in any wise communicable from the sick to the healthy population; they endeavored to calm the fears of the people against all possible danger, as it possessed, in their opinion, no more communicable properties than bilious or intermittent fever. In this manner they made themselves responsible for the death of hundreds. Many, relying upon such advisers, neglected the necessary precautions; intercourse with the infected vessels was indirectly encouraged, and by this means it was soon disseminated among the contiguous population; and in a few days more it was epidemic among the people residing near the wharves adjacent the infected vessels.*

On the 10th of July the Charleston Mercury urged in very strenuous terms the necessity for "captains and owners of vessels" to be prompt in procuring medical aid, in the *first* attack, while the mass of the citizens were, in effect, encouraged to introduce the disease into the city. The laboring classes as usual, and those who carry on the commercial transactions with the shipping, were the first victims among the inhabitants. The disease continued to spread slowly from the shipping to the population adjacent to the wharves, until the last of July, when it was admitted to be epidemic in the city.†

It is not my purpose in this or any other case, to point out the particular vessel which introduced the disease, because I believe that many are concerned in its introduction; it is the work of some days or weeks, and each vessel from an infected port, has its special agency in inducing an epidemic. There were vessels in the port of Charleston, with yellow fever on board, as early as the 7th of June. The brig Burmah

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* See New Orleans Bulletin, Aug. 10, 1839, quoted from N. Y. Express.

† Charleston Mercury.

is the first that we can refer to; the brig Braganza was soon after there with yellow fever on board, and many others subsequently.

All agree in the fact that for fifteen days after the disease began to excite alarm, it was confined exclusively to the shipping, and such as came from West India ports. Yet the public press, without evil design, we are sure, endeavored to bolster up the belief that it was a local disease, and a mere grade of bilious fever, produced by local atmospheric influences, although the resident population was at first exempt; while those who were least exposed to such influences, if they had existed, were the only victims. But blinded by an interested prejudice, they would not see.

As soon as the people perceived that the pestilence was extending the sphere of its action, they immediately adopted the usual and only measure for safety, and fled to the country. The rail-road to Augusta offered the most convenient and direct conveyance, and accordingly many embraced the opportunity of retiring to that high and healthy interior town, in the State of Georgia, *where yellow fever had never been known.* Some took with them beds, bedding, goods, and the articles usually taken by retreating families and merchants.

The disease was epidemic in Charleston from the first of August until the 20th of October, when it began to decline in virulence. The number of deaths I have not been able to procure.

8. *Augusta, Ga.* This city, within a few years, has become an important *commercial* depot for importations made through Charleston and Savannah for an extensive region of country in the interior of Georgia and South Carolina. It is also the point at which a great portion of the interior cotton crop of these two States is collected for those two maritime ports. As such depot it is the head of steamboat navigation on the Savannah river; and in 1839 was the *terminus* of the great Charleston rail-road. It is situated upon the Savannah river, 230 miles above the port of Savannah, and 120 miles by the rail-road from Charleston. The site is chiefly tertiary up-

land formation, in a high and healthy region, beyond the influence of marsh miasm, and all those matters to which yellow fever epidemics in maritime ports are ascribed.

Previously to the summer of 1839, it was proverbial for its salubrity, and noted for its *exemption* from yellow fever during all the ravages of that disease in Charleston and Savannah. Such had been its exemption from this disease at such times, that it furnished a plausible argument against the probable *importability* of the disease; for if importable at all, it might have been at some time transported from Charleston or Savannah, with which constant intercourse was maintained. As such, the fact was used by professor Dickinson of Charleston, in his remarks upon the *yellow fever* of that city in 1838. When those remarks were penned early in the summer of 1839, little did the learned professor think that nature herself would so signally confute the argument and vindicate truth and the immutable laws of nature; that even before his "remarks" met the public eye, she would snatch from him the argument which had been fallaciously used by many others in a similar manner.* But like a philosopher and a votary of scientific truth, he received the lesson taught by nature and renounced his error.†

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*See Med. Journal published by John Bell, M.D., Philadelphia, December 1839.

†In a letter to Dr. Strobel, of Charleston, dated January 14th, 1840, and published in the Charleston papers, and re-published in the New Orleans Morning Advertiser of December, 1841, Professor Dickinson acknowledges his change of opinion relative to the *importable* nature of yellow fever infection; viz—"I believe yellow fever to be *transmissible or communicable from one city to another*, provided the general circumstances of the two are similar or analogous; that is, I believe the unknown and *obscure cause of yellow fever is transportable from place to place, and in a variety of modes.* This cause requires for its efficiency an undefined occurrence of favorable circumstances, without which it will fail to produce its specific influences; but this is true of the agency of every cause of disease.

Of its contagiousness (using the word in its limited and popular sense), its direct propagation from one subject to another, I have never witnessed an example, and *until recently* should have denied the possession of this property in our climate. *The events of the last summer,*

Augusta remained uncommonly healthy for fifteen days after yellow fever had been epidemic in Charleston, and for nearly ten days after it had been epidemic also in Savannah. Within a few days after the general alarm and flight from Charleston, cases began to appear in Augusta, and chiefly in those who had retired from those infected points, until about the 15th of August. On the 17th and 18th of August, cases began to multiply, and on the 20th it was considered epidemic. From the 18th to the 31st of August, the deaths were only twenty-eight. From that time until the last of September the disease raged with great mortality, after which it began to abate. The number of deaths in the month of September was reported at one hundred and seventy.

The history of this epidemic will show that Augusta was exposed to a double source of infection; first, by the rail-road from Charleston, upon which the train of cars arrive in eight or ten hours; and secondly, by steamboats which reach Augusta in thirty-six hours from Savannah. The former makes daily trips, and the latter are successively arriving once or twice a week, with every variety of articles which retain the infected air in them.

The continued arrivals upon the cars, of persons with the latent seeds of yellow fever in their systems, to be soon developed in open yellow fever, besides other modes of introducing infection, tended strongly to accelerate the epidemic constitution of the city air for leading on the epidemic.

As soon as the inhabitants of Augusta were convinced that they were invaded by this unwelcome visitation, they immediately fled from the city and took refuge in the surrounding country. The physicians of the place, who believed in the local origin of yellow fever epidemics, as usual, began to search

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however, have inclined me to entertain an *opposite opinion.* An impartial perusal of the statements and arguments of Pym, Blane, Arejula, Wistar, Hosack and Monette, has satisfied me that it deserves to be ranked among contagious diseases.

I am sir, respectfully, your obedient sev't.

B. B. Strobel, M. D. Saml. Henry Dickinson "

for the usual imaginary sources of the miasm. It would havebeen strange if they had not been able to discover some innocent collection of animal or vegetable matter, which would serve, with the credulous, as a scape-goat to bear off the sins of the commercial members of the community who had been instrumental in its introduction, while it diverted the attention of the intelligent from the true cause of the disease. Accordingly the press soon announced that they had discovered "a pile of putrescent vegetable and animal matters near the upper trash-wharf," which no doubt had at once caused all the mischief, although it had remained there in a harmless state since the first of June!

Why did not yellow fever manifest itself in Augusta at the same time it made its appearance in Charleston and Savannah? Why was the epidemic in Augusta deferred until Charleston and Savannah were almost deserted by their inhabitants and the transient population? Why did it not commence in Augusta first, if it proceeded from local causes? Did the arrival of the people from those infected cities excite the extrication of pestiferous miasm from local causes, which had laid dormant up to that time?

We have shown already that an infected air is often generated or imported in vessels arriving in our ports from the West Indies, and that persons have beyond doubt, contracted yellow fever by visiting such vessels after they had arrived. The same atmosphere is likewise generated in steamboats from infected towns. Cholera has in like manner been introduced into many towns within the valley of the Mississippi, as I have abundant evidence to prove, during and subsequent to the Black Hawk war, on the upper Mississippi, several years ago. A cholera atmosphere may be generated from a number of cases on any steamboat or vessel, or in any house or town. The same is true of yellow fever under favorable circumstances in the local atmosphere of any given town.

Professor Dickinson, before cited, observes: "*Cholera is importable.* It may be conveyed from one city to another *by a vessel;* or it may originate during an unfortunate voyage on

board a vessel, which shall not only disease her passengers, but will infect persons who may venture on board in perfect health, after her arrival in port. In either case, the vessel herself, or the atmosphere which she contains, shall be in a state capable of communicating the disease to those who visit her. Cholera is, therefore, clearly a proper subject for quarantine regulations, and these should be strict and perfectly effectual."*

This is precisely the case with yellow fever during the hot and oppressive weather of summer in the southern part of the United States. The whole weight of impartial testimony sustains the position; and as it has been known to produce the most malignant and terrific epidemics in the ports and towns of the United States, we deem it a most important and proper subject of quarantine regulations for the protection of our citizens.

This point we shall endeavor still further to sustain and elucidate by facts and reasoning, which we desire to submit to the impartial reader and the candid enquirer after truth.

ORDINARY MODE OF INTRODUCING INFECTION.

The manner in which infection is introduced into towns and cities on the lower Mississippi, is through the medium or agency of ships or steamboats, as we have already shown in the early portion of our remarks. New Orleans is the point from which it is communicated to the interior river towns; and this city itself, in like manner, is annually supplied with a due portion of *fomites*, and infected air from West India ports, imported chiefly in trading vessels, which arrive almost daily from all those ports where yellow fever is known to be endemic at nearly all seasons of the year.

When any town or city, and especially those south of lat. 35°, contains *infectious air*, as already illustrated, that place is in a *proper condition* for the dissemination of *yellow-fever infection*, and for the prevalence of a fatal epidemic, although

*See Am. Jour. Med. Sciences, 1833, vol. 13, p. 359–60.

the population may have been entirely healthy immediately previous to the introduction of such infection. If this condition of the local atmosphere exists in an eminent degree, a smaller amount of infected air, or *fomites*, will generate the epidemic; if this condition of the local atmosphere is less concentrated, a larger amount of infection or fomites is requisite to produce the same effect; and a town or city in the latter condition may escape an epidemic, after the introduction of an amount of infection, which, under other circumstances, would have generated an epidemic. This position we desire to be borne in mind, for it will prevent the dissenting reader from urging those objections which are nugatory to one who carefully weighs this point.

Hence the arrival of infected ships, and steamboats, with goods on board impregnated with infection, in any port or town, may be eminently dangerous, or it may be comparatively harmless, according to the circumstances of the case. The number of steamboats on the waters of the Mississippi trading to New Orleans is not less than *three hundred.*

All who are practically conversant with yellow fever in the southern States, know full well, that beds, blankets, clothing, and all other porous articles, which remain a short time in a strongly infected atmosphere, whether limited to a single room, house, or ship, or to the mercantile part of a city, become impregnated with the active *materies morbi*, and will produce the disease in those who are subsequently exposed to its operation. It is equally well known that the entire atmosphere in a room will become so thoroughly infected, under certain circumstances, as to produce the disease in divers individuals who may enter such room, and breathe its atmosphere even for a short time.

Let us suppose a case. Yellow fever is epidemic in New Orleans; it begins to carry off its victims at the rate of 50 or 60 per day. Regardless of the danger, hundreds of strangers remain in the city, vainly hoping to escape the disease; one ship after another, crowded with foreign emigrants, German or Irish, arrive in the desolated city, and take up a habitation

in some refuse or desolate houses and sheds. Lured by the high wages for labor, they remain and expose themselves in the infected district, until the disease spreads rapidly among them. Every day diminishes their numbers, and a new focus of infection is generated in their camp or lodgement. Finding that the pestilence increases its ravages daily, without a prospect of abatement, they determine to escape from the city and pass on into the interior. They engage passage on the first steamboat for St. Louis or Louisville. The boat has been lying at the wharf in the infected district for several days, taking in freight of every description, and all more or less impregnated with infection. At length the boat is ready for her departure, and our foreign emigrants are crowded into the lower deck to the number of 50 or 100 souls, men, women and children, a motley crowd, packed and stowed, with their filthy bedding and clothes, into every recess and corner of the boat. They continue to sicken and die in this crowded atmosphere, during the hot sultry weather of August or September; and occasionally the boat lands to take in wood, and to bury two or three deck passengers who may have died the last night. The whole atmosphere in that part of the boat, and every article of bedding, clothing, and the like, becomes thoroughly infected, and will produce the disease in those who visit the boat at the different landings on her way up the river. By the time the boat reaches St. Louis or the mouth of the Ohio, fifteen or twenty of this miserable crowd have been laid in quiet repose along the solitary banks of the Mississippi.

This is not a case entirely of fancy; the parallel complete has been too often witnessed on the Mississippi within the last 20 years.

In many cases boats in this condition, on their ascending trip, land at Natchez or Vicksburg, to deposit their sick and dying, and perchance to bury their dead. They relieve themselves of these encumbrances at Natchez, or at Vicksburg, or some other town on the river.

It would be strange, if a succession of boats, in this condition, arriving every day or two, and generally discharging

their sick and a part of their foreign emigrants with the disease dormant in their systems, should communicate no disease in the crowded and stagnant atmosphere of the river towns. Yet because very often one or two houses are first infected, or because a particular district of a town or city becomes first infected, we find some of the medical faculty, as well as the illiterate, adduce this very fact as an argument in support of the extrication of a pestilent miasm from *some local cause* which they cannot indicate.

In all these instances the disease first manifests itself in those parts of towns and ports where the above species of population mostly congregate, whether near the wharves or not. However they generally find their temporary residence near the wharves and steamboat landings, in some of the numerous crowded wooden tenements of those places.

The number of German and Irish emigrants that arrive at New Orleans every summer is almost incredible; and of late years it is the principal port for which they take shipping, on account of the facilities afforded for reaching the northwestern States on the upper Mississippi. These crowd the deck of every steamboat which leaves New Orleans for the upper country during the summer, but especially when the epidemic begins to rage in the city.

The constant arrival of these northern foreigners in July, August, and September, at New Orleans, and many of them touching on their way at West India ports, contribute materially to aggravate the malignity of the disease in that city, and to extend it into interior towns.

(TO BE CONTINUED.)

ART. II.—*A Case of Thymic Asthma.* By BENJAMIN DENNIS, M. D., of Cincinnati, Ohio.

As there are many highly respectable physicians who deny the existence of thymic asthma, the following case, which was supposed to be one of that kind, and was treated as such, may possess some interest.

In the latter part of December, 1839, I was called to see a child aged 15 months, son of Mr. C——, of Walnut street, who, according to the unsatisfactory history of the case, as gleaned from its mother, had been for the five previous months troubled with difficult respiration, continual wheezing, and occasional attacks of dyspnœa with threatened suffocation. Up to the time just mentioned, the child had been favored with uninterrupted good health; but now, in consequence of the duration of the malady, it was greatly emaciated—reduced almost to a mere skeleton, The attacks of dyspnœa occurred as often as four or five times during twenty-four hours, and each of them created the most fearful alarm concerning its termination.

Having never before witnessed a case of thymic asthma, nor read much relating to its true character, I did not suspect the presence of that affection, but was disposed to regard the case as one of simple asthma. In this error I was not alone, as five other medical gentlemen who had visited the child before I was consulted, had arrived at the same conclusion. With this view the usual remedies applicable in the cure of asthma were prescribed; but perceiving no improvement in my little patient, I suspected that the difficulty might be the consequence of elongated uvula; upon an examination, however, this proved not to be the fact. I then determined upon a consultation.

January 10th, 1840. Visited my patient in consultation with Prof. J. P. Harrison, who, after instituting a careful inquiry into the history of the family, thereby ascertaining that they were predisposed to scrofulous affections, suggested to me

that the case was one of thymic asthma. We immediately proceeded to examine the gland, which was found greatly enlarged, producing a very marked projection of the superior end of the sternum; it extended itself superiorly to the thyroid gland, and laterally to about a half-inch beyond the sternal extremity of each clavicle. The following prescription was agreed upon:

℞ Iodine ℈j.
Hyd. Potassæ, ℈ij.
Aqua distillat. ℥j.
Fiat solutio.

Two drops, to be given in a tea-spoonful of sweetened water, three times a day.

The parts over the gland were directed to be rubbed three or four times a day with salt water.

This course, attended with a gradual improvement in the health of the little patient, was continued for two months, increasing the dose of the iodic solution one drop each successive week, and substituting the ointment of iodine for the salt water.

A small portion of calomel and rhubarb, a grain of each, was prescribed at occasional periods, when the state of the bowels rendered it necessary. Plenty of fresh air and plain, but nutritious diet, were also advised.

The gland continued to diminish in size, and at the expiration of three months from the time of our visit, the health of the little sufferer was apparently completely re-established.

In February last, I was informed through a friend of the family of Mr. C., who is now living in Illinois, that the child had had no return of the affection, and that his health was uniformly good.

May, 1842.

REVIEWS.

ART. III.—*The Practice of Medicine; or a Treatise on Special Pathology and Therapeutics.* By ROBLEY DUNGLISON, M. D., Professor of the Institutes of Medicine, &c., in Jefferson Medical College, Philadelphia; Lecturer on Clinical Medicine, and attending Physician at the Philadelphia Hospital, &c. &c. In two volumes, pp. 1323. Lea & Blanchard, Philadelphia.

There are few, if any, offices that are rewarded with less kindness and thanks, and few, if any, with more dislike and censure, than that of reviewing—more especially *critical* reviewing. Nor is there any one more certain to be thus rewarded, at least in a higher or lower degree. The reason is plain. If the reviewer be at once both competent and faithful—if he be both able and resolved to do strict justice to the subject of his examination, his conscience, taste, and judgment compel him to find some fault with perhaps every work that issues from the press. And the vanity of letters, the avidity of applause, and the pride of authorship, rarely forgive either censure, exception, or even a neglect to praise.

In truth, if the matter be skilfully scrutinized and correctly judged of, it will be found that there are few tasks which man has to encounter, that are more complicated in character, and more difficult of performance than that of the reviewer. These evils arise, not alone from the matter, the spirit, or the mode of composition of the book he has to examine—nor alone from the united influence of the three. To gain approval, and indeed to escape reproach, the reviewer must, to no small extent, frame his critique in accordance with the tastes, the

judgments, and even with the fancies and prejudices of several classes of individuals.

Of these classes, the author of the work is of course a very important personage. A single hair-breadth of deviation, made by the reviewer, from what he deems the *right line* of respectful regard, or of virtual commendation, is sure to produce silent dissatisfaction, or open complaint.

Are there, within reach of the critique, any number of contemporary and rival authors, who have recently written on the same or on similar topics? If so, their choler is sure to be stirred up, and their ire awakened, by whatever may be said, which does not, in some way, redound to their credit, at least, if it does not minister to their vanity and self-esteem, by some oblique or direct insinuation, that the palm of authorship is adjudged to them. Is any remark made that can be tortured by construction into an imputation towards them of a want of certain excellencies which others possess? That is magnified into an act of condemnation hardly tolerable. Is no form of reference made to them at all? That is wrought up into an evidence of neglect, which is still more offensive. For, to the vain and the jealous, the bitterest potion that ingenuity can compound, or mischief administer, is, *to let them alone.*

Still more captious and difficult to be pleased is a class of readers, who had never spent a previous thought on the subject under discussion, and who are actual strangers to both science and letters. And this class is querulous and presuming in proportion to their ignorance. As respects merit in composition they have no real knowledge, and therefore supply their want of it by noisy pretension. Another description of readers, who give the reviewer neither annoyance nor concern, is the enlightened, the tasteful, and the inquiring, who examine, observe, and deliberate, and ultimately deem it most safe and advisable to judge for themselves.

In the midst of this throng of petty perplexities, (and more might yet be cited,) what is the hapless reviewer to do? The answer is obvious. To thread his way in safety through the entire labyrinth of difficulties that beset him, is impossible. He must either, therefore, in absolute despair, abandon all attempts to free himself from the entanglement created by them; or he must cut the knots which he cannot untie, and resolve to gratify his own taste, conscience, and judgment, by awarding justice to the extent of his ability, and allow each class of read-

ers, whether satisfied or dissatisfied with him, to form such views, and adopt such measures, as may be most agreeable to them. And this is the course which we, on the present occasion, are resolved to pursue.

Toward the attainment of the end he ought to have in view, in the examination of a work on which he means to pass a critical judgment, a reviewer may, as a preliminary measure, do something to prepare himself, by asking and answering the following questions.

1. What were the leading objects of the author in the writing and publication of the work? 2. Are these objects laudable and useful, or the reverse? 3. Does the work contain preparations and means well calculated for their accomplishment?

The work whose title forms the heading of this article, and on a brief examination of which we are about to enter, purports to be a system of the "Practice of Medicine; or a Treatise on Special Pathology and Therapeutics." The true interpretation of this announcement is, that the writer designs to prepare a treatise containing a view of the *whole* "Practice of Medicine," not of any *circumscribed* and *insulated portion* of it.

That this is a title, then, of wide scope and lofty pretension, cannot be denied. Its claim is to empire, or universal authority in medicine, unlimited in extent, except by the limits of medical knowledge, and uncontrolled in power, except by a want of professional means and measures not yet discovered, devised, or reduced to practice. In fact the claim is virtually to a scheme of *medical omniscience*, as respects the past, beginning with the fountain-head, or earliest records of the profession, and reaching without a chasm to the present period. To attempt to write *a system* of medicine (and Professor Dunglison has done no less) is to aim at the pinnacle of medical enterprise. It involves an effort to establish, for the time, a professional autocracy, to continue in force and fashion, until new discoveries and further improvements shall call for a more enlarged and enlightened one. To complete the effort then, is to collect and condense into a single treatise a digest of all that is known of the principles and practice of medicine, at the present period, by the Faculty of the world. An omission of any thing important is so far a failure, and bespeaks in the author either carelessness, neglect, or some sort of incompetency to the task he has undertaken.

The leading object of Dr. Dunglison's "Practice" appears to be to improve the profession of medicine, in four points of view, each of

the four being highly useful and praiseworthy. And these points are its elements as a SCIENTIFIC—A LITERARY—and A PRACTICAL CALLING; in each of which we say, certainly it ought to have been, and we doubt not was the purpose of our author to contribute to its advancement. Nor is this all that his enterprise exacted of him. It was also his duty, as the fourth point, to facilitate, as far as possible, the attainment of an accurate and complete knowledge of medicine, by the younger and less educated portion of the American Faculty—more especially by medical students.

It does not, however, comport with our present intention, to scrutinize very strictly, much less severely, all the fitnesses or unfitnesses of the work for the promotion of these several forms of improvement. An effort to that effect, besides involving a toilsome and unpleasant task, would require for its accomplishment much more time than we have now at command, and a more protracted and profound investigation, than we are willing to encounter. Nor is this all. The documents growing out of it would fill up a larger space than, in this Journal, could be conveniently allowed to it, conformably to the size and economy of the work. Our review, therefore, (if so it may be called,) will consist chiefly of a succinct series of general observations, accompanied perhaps, or rather followed, by a more formal and detailed discussion of one or more controverted points of doctrine.

As already intimated, the object of Professor Dunglison, in the volumes before us, has probably been, (assuredly it ought to have been,) to improve medicine as a *scientific*, a *literary*, and a *practical* profession, and to facilitate the acquisition of a comprehensive knowledge of it by the American Faculty, especially the junior portion of them, and by medical students.

As regards the SCIENCE of medicine, the Professor has made no improvement in it. He has not even attempted to improve it. In reference to that point, therefore, he is not perhaps justly amenable to blame. To find fault with a writer because he has neglected or failed in what he neither has promised nor is prepared to do, would be illiberal and unjust. And such precisely is the case with our author. He is under no pledge, except by implication, to improve medicine in even the simplest of its scientific qualities. Nor, may we judge from aught he has previously done, do we consider him in any degree fitted for a task of the kind.

Whatever may be the value and efficiency of the Professor's mind, as a condensing lens, to collect within a narrow sphere the lights

emitted from a wider one by the original and inventive minds of others, it possesses, if we misunderstand it not, none of the properties of an *electron per se*. It gives not out from itself any of the flashes or coruscations of genius, nor has its course been marked by any of those happy combinations, discoveries, or revelations, which proclaim its possession of creative originality. Though we ourselves do not pronounce it a *positive parasite*, yet, were any other reviewer to do so, we should deem it incautious in an antagonist to enter the lists with him, in a trial of his truth by the ordeal of battle. Indeed might we, without giving offence, institute a comparison on such a subject, we would say that the Professor's mind in its relation to the *minds* of other men, is inferior to the mistletoe in its bearing towards the plant to which it adheres. Though that parasitical product derives from the spot to which it is attached, the matter that nourishes it, yet, by its own powers, it digests, matures, and moulds that matter into its own organism and identity. With the mind of our author, however, the case is different. While it draws its matter of nutriment from the writings of others, it allows that abstracted from each different and dissimilar source, to retain almost entirely its own peculiar form and character. Hence the productions of the Professor, instead of being uniform, consistent, and tasteful compositions, exhibit a crude mosaic or rather patch-work appearance.

We do not deny to Dr. Dunglison either *readiness, hability, or tact* in the *manufacture* (we mean the *compilation*) of books. We acknowledge, on the contrary, that he possesses each in sufficient abundance. But *there* perhaps his book-compounding attributes end. In her allotment to him of the higher and more valuable quality of *judgment*, nature has been sparing, not to say niggardly. Neither are his selections choice, his groupings skilful, nor his arrangements and classifications either able, instructive, or in any way highly appropriate or beneficial. Every thing from his pen, (perhaps we should say *hand*, which may wield other implements besides his pen) is too much encumbered with the minutiæ of detail, and is too scanty in matter of general import. In his nosological catalogues, these faults are broad and striking.

Notwithstanding these remarks, we are compelled to acknowledge, that our author has shown a redeeming share of sound common sense, in his selection of the mode of book-making he pursues. The reason is plain. As already intimated, it is the only mode that he is qualified to practise. Were he to attempt a more elevated and original

one, his failure would be equally signal, certain, and humiliating to him. And as relates to himself, this is one of the decrees of fate, which he has had the discernment and good fortune to discover, and the discretion to acquiesce in, and has therefore been sufficiently successful in his literary enterprises. And had he not thus acquiesced, his fortune as an author would have been, of necessity, the reverse. In referference to this point we shall only add, in corroboration of what has been already alleged, that all the works which our author has hitherto published have been the product of the inferior order of the intellectual faculties—of those which, by observation and perception, receive knowledge, and communicate it by language. Of the fruit and finish of the higher intellectual faculties they are altogether destitute.

In as much, then, as the actual improvement of *medical science* consists in one of the three following forms of action, or in the union of all of them—*the discovery of new matter—new creations produced out of matter already known—or new inferences deduced from one or both, in the capacity of premises;* in as much as this is true, and as Professor Dunglison has fallen far short of such distinguished performances, and even shown himself incapable of them; it follows, as a corollary, that, by the work before us, he has effected no improvement in *scientific medicine*.

On the literary standing of the volumes we are compelled to pass a similar judgment. It is *ordinary* in all parts, except where it is *low*. The style of the work is every where loose, crude, and ungraceful, with frequent outbreaks of pomp and bombast. Without pronouncing it positively obscure and muddy, we are fully justified in saying that it is wanting in that cloudless perspicuity, which, in every kind of composition is the most important quality, and, in elementary treatises in science, is altogether indispensable. Criticism might, *in charity*, deal gently with it, were it the production of a *freshman or a sophomore*; but, coming, as it does, from a grave Professor, in the very meridian of mental life, and who prides himself on being a *British scholar*, (educated, we mean, in England) strict justice should be made to visit it; and, all circumstances considered, that is *condemnation beyond reprieve*. To the simplicity and purity, conciseness and vigor of well prepared composition in the Anglo-Saxon tongue, the style and manner of the work are as utter strangers, as if they were not the product of a native pen. As respects many of the

writer's customary forms of expression, though we do not pronounce them actual *foreignisms*, yet have they more of a foreign than of a *native* cast. They are at best but a hybridous product between the language of Great Britain and that of sometimes one and sometimes another of the nations of continental Europe. In most instances, however, the adulteration comes from France. Yet does the writer bear the character of a ripe and high bred English scholar.

Nor have we yet referred to all the forms of *affected* and vitiated phraseology in which the Professor indulges himself. In instances, which occur so frequently that we venture not to enumerate them, he employs words under a meaning wholly unauthorized by standard lexicographers, and by the most exemplary writers and speakers of the English language.

Among these misused words stands "invoke" a term of whose employment he is so infatuatedly enamored, that he monotonously and in open violation of etymology and taste, judgment, custom, and all other correct guides and authorities of speech, introduces it on almost every practicable occasion. And in carrying out this strange predilection he not unfrequently so distorts and misapplies it, as to render his meaning in the employment of it equivocal. Of this the following exemplification may serve our purpose. "Pathological anatomy—with heedless or too enthusiastic observers—has too often been *invoked* to establish the former of these positions."

A dislocation of a word more awkward and striking than this can hardly be imagined. And very many similar ones, we say, occur in the employment of the same word, in the course of the work.

"*Revulsion*," if we misunderstand him not, the Professor often employs as if synonymous with *revolution*, or entire change, and "*economy*" as if identical in signification with *organism*, *structure*, *or system*. Now every one may and ought to know, and every medical *scholar* does know, that, when applied to the human body, "economy" strictly means the *action*, or *mode* of *action*, and the native habitudes of the *living organism*, or of some portion of it, not the organism or structure itself. Indeed to our taste even the habitual employment of the *word organism* is exceptionable and repulsive. True, the term itself is legitimate English, and may be occasionally used without much impropiety. But several writers of the day, and quite *distinguished* among them is our author, give it a preference and use it with a frequency which we deem pedantic, affected, and tasteless. In

a great majority of cases the word "*organization*" or "system" should receive over it a decided preference. In truth we regard the present fashionable use of it as an unscholar-like dash of *literary dandyism*. Grave Professors should be above a practice so empty and boyish.

True; Professor Dunglison is not, we say, the only medical writer who thus errs in the employment of these terms. Some others still higher perhaps in public confidence and standing, but certainly not lower, have done the same. So much the worse. The larger, stronger, and more authoritative the erring party, the greater is the evil, and the more loudly does it call for correction or removal. Hence we have deemed it our duty, as faithful reviewers, to make it the subject of the preceding strictures. And we regret that a want of room has prevented us from proving, by extracts from our author's "Practice", the truth of the imperfections we have imputed to its style.

Nor have we yet closed our animadversions on what we deem the unscholarlike and sophomorical characteristics of the Professor's style. His predilection for the constant use of a certain set of popular and new-fangled words and phrases, savors not a little of affectation and the unmanly weakness of following the fashion, without calmly reflecting whether it be wise or unwise, right or wrong. This charge we illustrate by specifying the substitution of the words "*normal*" and "*abnormal*" for *natural* or *regular*, and *unnatural* or *irregular*, "*nutritive* or *vital fluid*" for *blood*; "*hyperæmia*," instead of *inflammation* or *congestion* of blood—and scores of others similarly abused, on the exposition of the whole of which we have not leisure at present to dwell. A few more of them, however, we shall here enumerate.

Our author has been guilty of the gross tautological blunder of using the expression "*morbid derangement*," which is tantamount to *morbid morbidity*, or *deranged derangement*.

Another blunder no less discreditable is the substitution of *agency* for *agent*, as in the following sentence.

"If a healthy person exposes his feet to these *agencies*" ("cold" and "moisture"), &c. Now "cold" and "moisture" are not "*agencies*" but *agents*—the former meaning *sorts* or *kinds of action*—the latter the persons or things *that themselves act*. Under no figure of speech, therefore, or construction of language, can either of these words be cor-

rectly substituted for the other. Hence nothing but defective scholarship, or unpardonable neglect, could have produced in our author the blunder here committed.

Again,

"As in the case," says the Professor, "of every other disease, not induced by any mechanical cause, the first impression must be made on the *contractility* or *vital properties* of the part with which a morbific body comes in contact."

This clause is also exceedingly faulty and unscholarlike—if indeed by scholarship, be meant a power or state of preparation to *think*, as well as to *write* and *speak*, with correctness and propriety. The phraseology employed in it is indicative of a striking *inaccuracy* of discrimination and jndgment.

To talk of making an "impression on *contractility*", or any other "*vital property*," is to express an idea (if in reality any idea be expressed by such words), in direct opposition to the principles of physiology, as well as to those of common sense.

A "morbific body" does not, in the production of disease, impress "*a vital property.*" As well might our author speak of making an impression on a *shadow* or a *thought*. The thing impressed must be substantive. Through the medium of "contractility" or some other "vital property," the "morbific body" impresses the organized part, produces on it a morbid effect, and in that way changes and deranges also the vital property; and disease is the result. For the organ or part is the *fountain* or *parent-stock*, and the vital property the *issue*. And as is the condition of the former then, so must be that of the latter.

We have said that the Professor's style is at times exceedingly cloudy or even muddy and obscure; and the following sentence proves our assertion.

"It is, indeed, impossible to fix, with any thing like precision, as has been attempted, the exact sequence of the disorder of innervation, circulation, and secretion."

If to this clause any one can attach a single clear, well-defined and determinate idea—one single idea, we mean, more certainly and definitely expressed by the language of it than another—if any one can do this, we shall acknowledge him our superior in *clairvoyance*. We can perceive in the phraseology of the extract nothing but a mass of fog and muddiness.

No matter, we repeat, whether other writers, in common with our

author, employ these words or not. Their habitual use bespeaks affectedness, and an effort to appear at once both learned and modish.

Professor Dunglison should hold himself above such empty ostentation. Men of mind and attainment should and do engage in substantial operations with the machinery of facts, leaving to boys and inferiors in general to play at crambo, and other forms of mere verbal amusement.

These strictures on style we shall close by observing, that our author makes books too rapidly to avoid in them the commission of errors and blunders of every description which haste and a want of circumspection can produce. His aim seems to be *quantity* rather than *quality*—to compile and publish very *many* books, rather than very *valuable ones.* He appears ambitious to be pronounced able, not to compose a *thousand lines*, like the satirist's poetaster, but to make a *thousand extracts*, "*stans uno in pede.*"

The rapidity with which the Professor prepares his books is productive of two effects, neither of which is favorable to his authorship. It prevents him from displaying in the style of his works either elegance or taste; and it renders his productions too long. Haste in composition conduces to *superfluity* in words, and *scarcity* of thought. To the condensation of matter and style, much time and labor are indispensable. The truth of this may be illustrated by a well known anecdote of a celebrated sermonizer.

The orator was asked how long a time would be requisite for him to deliver, on a given topic, the best sermon he could prepare by the labor of a week? He answered, *An hour.* How long could you preach on the same subject, after the labor of half a week? Ans. *Two hours.* And how long, if you had no time for preparation at all? Ans. *All day.*

Might we therefore, without giving offence, we would, as friends, advise Professor Dunglison to devote more time to the preparation of his books, and abridge the number of them. By good-naturedly complying he may oblige his readers, by making his productions shorter, and improve his own reputation, as a writer, by making them better.

We strongly suspect that the worthy Professor has allowed himself to be too much flattered by the encomiums passed by certain reviewers, or rather *noticers*, on the prolificness of his mind. He has been highly complimented, on account of having published an unusual number of works, within a given number of years. We beg to as-

sure him that this is a fallacious ground of compliment. True; by hasty book-making he *may* advance his *pecuniary* interest—but never will he, in that way, improve the condition of either his scientific or his literary reputation. We shall only add, that the reviewer who justly censures a writer for his faults, is more truly and beneficently his friend, than the flatterer who applauds him for excellencies which he does not possess. And, without aspiring to the standing of a seer, we venture to predict, that, provided Professor Dunglison receive what we have here said in a proper tone and temper of mind, and make the proper use of it, he will find hereafter more substantial ground to thank us for our animadversions, than he will to thank those who have injudiciously or dishonestly flattered him, for their praises.

That these free and unceremonious strictures on Professor Dunglison's "Practice of Medicine," will be attributed by some persons to unfriendliness of feeling toward him, on our part, is hardly to be doubted. The charge, however, if preferred, will be groundless. We are not unfriendly toward him. But, in the words of Brutus to Cassius, "We do not like his faults." And his style is not only faulty in itself; it is calculated to do mischief by the production of similar faults in others.

With the junior portion of the medical profession in our country, more especially with pupils, the Professor is a popular—I might perhaps say, a *favorite* writer. And favorites are likely to be followed and copied, particularly in the attributes which render them favorites —and in none of these more so, provided they be writers, than in that of style and manner.

It is more than probable, therefore, perhaps even certain, that the style of Professor Dunglison will become a model for imitation by young medical writers, whose taste and judgment are yet immature, and easily vitiated and led astray. And if so, the consequence is plain. Such imitation will operate to the deterioration of the style of the medical writings of our country. Hence, to contribute *our* part toward the prevention of the evil, we have deemed it our duty to pass on the Professor's composition the foregoing strictures. And, should the measure become necessary, or even advisable, we hold ourselves prepared, as already mentioned, to prove their correctness by extracts from the work.

But the most important element of our author's production is yet to be examined. We allude to its practical one. What will be its

bearing on the treatment of disease, the alleviation of human suffering, and the preservation of human life? Will it, in these respects, be productive of any change, amounting to a truly valuable improvement? To be able, under the approbation of our conscience, and the sanction of our judgment, to answer this question affirmatively, would be eminently gratifying to us.

But such gratification it does not fall to our lot to experience. In a practical point of view, the volumes before us present to us nothing with which we were not already familiar, when first we opened them. Indeed, neither on the score of principle nor practice have we been able to discover any thing in them positively new. If to this they furnish an exception, it consists in a catalogue of technical formulæ, to which, by enlightened physicians, possessed of candid, liberal, and independent minds, who rely and act on principles and generals, rather than on petty points and particulars, but little if any importance is attached. To speak more plainly and definitely on the subject, we are unable to discover any solid or even specious ground of belief, that a single disease has yet been, or is likely to be hereafter cured, or a single life saved, through the instrumentality of Dunglison's "Practice of Medicine,,' which might not have been as well, and as certainly effected, had the volumes never been issued from the press. All this, however, would have been excusable in our author, had he, without the addition of any thing of novelty or improvement by himself, in either fact or principle, embodied in his work a correct account of the most efficient and successful modes of practice now pursued in a very large proportional part of our own country. This, however, he has failed to do—for what reason we presume not to know. We refer to the *fact alone;* because in that only do we take any concern. In truth, moreover, we doubt not a little whether he has faithfully recorded the most vigorous and successful forms of practice pursued in any of the sickly parts of our country. Of western and southern regions only, however, do we speak with positiveness.

Instead of examining and recommending, or even treating with common respect, what is well known to be the *most* successful, if not the *only* successful mode of treating the endemic and epidemic complaints of the Mississippi Valley, the Professor has somewhat superciliously, and therefore exceptionably scouted and condemned it. On this point we speak with confidence, and tell him plainly, that the form of practice which he dignifies and honors with the epithet *"philosophical,"*

because he deems it the most enlightened, judicious, and efficient, would, if employed in the treatment of the giant diseases of the West and South, prove, in many cases, virtually an abetment of manslaughter. If it did not itself kill, it would allow disease to do the work. The want of judgment of our author on this subject, and his rejection of, or unacquaintance with, the issue of all experience, are matters of astonishment to us. And that astonishment is increased, by the overweening confidence and utter disregard for the sentiments of others, with which he proclaims and urges his opinions, when contrasted with the limitedness of his opportunities for acquiring the requisite amount of correct information. For, in the knowledge of the diseases of hot climates and valley-situations obtained by observation and experience (and no other sort is of any avail) he is wholly unversed. The Professor is not indeed an advocate for the feeble "gum-water" practice of Broussais, an attempt to introduce which into Philadelphia was recently made by a popular teacher. May we judge, however, from many of his receipts, prescriptions, and general directions, his scheme of therapeutics is, in not a few instances, but little superior.

Without pretending to any *positive* information in the case, we feel authorized to believe, that Professor Dunglison has never been to the south of the 37th or 38th degree of north latitude, and that, even when there, the place of his sojourn was *mountainous*—its elevation, as respects *temperature* and its effects on health, being equal to several degrees of northing. That he should possess then any amount of *self-acquired* knowledge of the complaints of warm and sickly climates, is absolutely impossible. Nor will he himself contend for the contrary opinion. And we repeat, without fear of refutation, that, in relation to successful practice in such places, no other kind of medical knowledge is of any efficiency. Knowledge acquired exclusively from books, unaccompanied by experience, is, for practical purposes, unavailable and useless.

For proof of the correctness of this statement, we need only refer to our author's preface. He there reveals to us the extent and variety of his travels and residences. And they are both considerable. According to his showing, he has been in the north of England, and in Edinburgh and Paris, as a student of medicine, in London as a practitioner, and, as a teacher and a practitioner, in the Universities of Virginia and Maryland, and in the Jefferson Medical College, and one of the hospitals in Philadelphia. And there terminates the career

of his shiftings of residence, and its several concomitants; having reached from about north latitude 54° or 55° to north latitude 37° or 38°, and over a stretch of longitude much greater. But he has never, we repeat, been a resident of a hot and sickly climate. He has never even visited one of the true southern and western States of the Union, and hence knows, expxrimentally and practically, nothing of the character and treatment of their diseases. And he, like all other men, is incompetent to teach, either orally or in writing, what he does not understand. Yet to this truth, which is as indisputable a maxim as any in mathematics, he seems (may we credit his own words) to be an entire stranger.

In the preface to his "Practice" he first tells us that the "great principles of Pathology and Therapeutics are the same every where." And of the truth of that sentiment no ghost need rise from the dead to convince us; in as much as all men fully admit it without such evidence. But all men as fully and firmly reject his opinion, when he immediately adds, that "one who has been well grounded in those principles can exercise his profession with as much satisfaction to himself, and advantage to the sick, in the scorching presidencies of British India, as in the more temperate regions of our own country."

True; a well educated physician can treat successfully the complaints of those burning regions when he has learnt, by a skilfully directed experimental apprenticeship, to do so. But to contend that he can thus treat them, on his first encounter with them, merely because he is "well grounded in the principles of Pathology and Therapeutics" as they are taught in medical schools—to contend for a notion so empty as this, is to set recklessly at defiance, and stubbornly gainsay the sound dictates of common sense, as well as the verdict of observation and experience. Were the fancy of Professor Dunglison on this topic correct, where would be the value of elaborate treatises written exclusively on the diseases of hot climates—or indeed of any particular climates or localities whatever? Such productions would be supererogatory and useless, and therefore mere encumbrances in our libraries. Let young men "ground themselves well" in the mere "principles of Pathology and Therapeutics," and, in our author's opinion, they become on the instant, efficient practitioners. Hence, the worthlessness of the writings of Lind, Cleghorne, Hillary, Hunter, Moseley, Chesholm, and the entire class of writers on tropical complaints!! They are all superseded and rendered stale

and valueless by our author's "Treatise on special Pathology and Therapeutics"!!—because it contains an exposition of the principles of those two branches of medical knowledge! A position more notoriously fallacious than this it is impossible to imagine. Yet is it a fair deduction from the visionary doctrine avowed by our author.

At another of the prefatory passages of the Professor's "Practice of Medicine" we are greatly surprised. It shows, if we mistake not its nature and bearing, a looseness of thought, and a *want* of *comprehenhension*, or a *miscomprehension* of the correct relation of cause and effect, quite unworthy of its distinguished author. It is as follows.

"Hence the medical officers of our army and navy, especially the latter, whose duties carry them to every part of the globe, are found to be as successful in the management of the cases that fall under their care in distant regions, as they would be in the treatment of those that prevail in the spot where they received their medical education."

To pronounce the statement contained in this extract *a gross exaggeration* would be no doubt deemed language excessively discourteous and exceptionably strong. Yet does the case admit of language still stronger and plainer. The statement involves a *positive misrepresentation*. "The medical officers of our navy" are *not* "as successful in the management of the cases that fall under their care in *distant regions*," as in the treatment of our own domestic diseases, with which they are familiar. The truth of this appears from scenes of distress and desolation that have often occurred in the West Indies, and other intemperate and sickly climates. Our sailors and marines, new to such places, have been attacked, soon after their arrival, by forms of disease equally new to the "medical officers" of the ships. And the issue of the visitation has told a tale exceedingly different from that which our author has inserted in his preface. The mortality among the "new-comers" has been often appalling. Why? Chiefly because the "medical officers" have been unversed in the character and treatment of the prevailing complaint. Yet have they not been altogether uninstructed in the "general principles of Pathology and Therapeutics."

There exist perhaps two principal causes why our sailors and marines are swept off so alarmingly, under the complaints which assail them, soon after their arrival in hot and sickly places. Their constitutions being yet unacclimated renders them more liable to fatal attacks;

and their physicians being in a great measure strangers to their maladies (being certainly inexperienced in the treatment of them),are less skilful in the duty devolved on them. But this state of things becomes gradually amended. Time acclimates the constitutions of the officers and crews; and experience gives skill and tact to the physicians and attendants. And, as the natural consequence of such changes, the disease becomes less formidable and fatal.

All things considered, we are at a loss to conceive how a medical writer could broach and attempt to vindicate a more visionary and untenable notion, than that on which we have briefly animadverted. An effort to prove the existence of an "*elixir vitæ*," or to manufacture such an article, would hardly surpass it in wildness and folly. And in the amount of mischief our author's hypothesis would inevitably produce, could a belief in it be widely extended, it would throw far into the back-ground all the dreams in which the alchymists have indulged. But, fortunately for the credit of medicine, and the interest of man, the glaringness of its fallacy, by preventing its adoption, will extinguish in embryo the evils that would arise from it.

Few things in medicine have surprised us more than the inveterate pertinacity, with which Professor Dunglison, and perhaps some other writers and teachers in the Atlantic States, adhere to their notion, that they are themselves actually competent to the exposition and treatment of the herculean diseases of the West and South, *which they have never witnessed*—and (still more erroneous and assuming) that they can communicate to their pupils a thorough practical knowledge of that which they have never themselves had an opportunity deliberately to study, nor even momentarily to inspect!! The Professor, as we are told, is a sturdy disbeliever in *mesmeric clair-voyance*, and even imputes to those, who are holders and advocates of the opposite belief, a condition of mind scarcely short of *imbecility and foolishness*. Yet does he labor, with the zeal of a fanatic and the perseverance of a martyr, to impress on the world an implied admission of his own *omnivisient* clair-voyance—(may we coin an extraordinary name for so extraordinary a power)—a faculty so clear in its function, and so boundless in its sphere of action in him, that he can, by means of it, while seated in his study in Philadelphia, explore successfully the specialties, as well as the general characters of the complaints of the Mississippi Valley, and learn how to cure them!! "*Risum teneatis amici!!*" So easy and natural is it for gentlemen of a certain organ-

ization, temperament, and caliber, to strain at gnats, as respects the performances of others, and to swallow camels and moose-deer themselves!!

True; in justice to our author, and the other Atlantic writers and teachers, who claim such super-eminent *clair-voyance*, in relation to western and southern complaints, we are compelled to acknowledge that their claim is in *words*, rather than in acts. Hence, when they are making preparation to write, speak, or lecture on a western disease, they consult either western men, or western writings, or both, for the materials they want. Nor can thay possibly derive them of the slightest value from any other source, except by crossing the mountains, and practising their profession for a time in the West. And were they to adopt that expedient, they would soon be convinced of the truth of our remarks—that they must either abandon, in some most material points, their eastern modes of treating disease, or surrender all hope of successful results.

Such, we venture to assure them, has been the case with all pupils, who, educated exclusively in Atlantic schools, have passed the mountains, and pursued their profession in the Mississippi Valley—with all, at least (and their number has not been small) with whom it has fallen to our lot to converse on the subject. They have been compelled to exchange the practice inculcated on them by eastern teachers, for one exceedingly different, derived from western example, observation, and experience.

In truth, to many eastern physicians whom we could name, a sojourn of a few months in the West would be eminently serviceable. The experiment, if properly made, would teach them not a few things of which they have no knowledge, and which notwithstanding they deeply need.

In point of feeling, it would impart to them a more liberal share of modesty than they now possess. Does any one ask us, *in what way* it would thus act? We answer, by teaching them a more accurate knowledge of themselves, *in comparison with others*—ay; even in comparison with *back-woods* men! It would enable them to know, and compel them to confess that, in all new-settled tracts of country, there is no deficiency in the knowledge and fitness of the inhabitants, as relates to any of the essentially requisite pursuits and duties of life. All things necessary to the varying wants and homely comforts of the people are not only done, but satisfactorily done. And this is perhaps as

true of the treatment and cure of diseases, as it is of any other forms of business. Many a practitioner, who travels from house to house through the forest, carrying his powders, pills, and potions in his saddle-bags, could give instructive lessons, and set a profitable example, even to *eastern profesors*, in relation to the treatment of the sick whom he visits. He could convince them that he surpasses *even themselves*, notwithstanding their accumulated and highly and justly-prized stores of *book-knowledge*, as respects the cure of the complaints of the place. Nor to this would Professor Dunglison himself form an exception. In the management of the diseases of the forest, the comparatively unlettered and plain-mannered physician of the "back-settlement" would be superior to the book-learned and polished physician of the metropolis.

Of this superiority the reason is plain. The country practitioner possessed of it is, by long experience, familiar with the diseases he prescribes for, while he of the city, for want of experience, is a stranger to them.

Let it not be imagined, from these remarks, that we, in the slightest degree, undervalue medical literature. Far from it. Our only meaning is, that as regards the cure of disease, it is much less valuable than medical experience. And in this every physician of common sense will heartily concur with us.

Though Professor Dunglison is not alone possessed of the conceit that he is completely accomplished in the knowledge of the nature and treatment of western complaints, and that he can therefore expound them and communicate an accurate acquaintance with them to pupils, as thoroughly and instructively as western teachers; yet, if we mistake him not, he contends for that notion more openly and doggedly, than any other individual in the schools of the east. In truth it has long been our belief, that the Professor has a propensity unusually strong, to prefer a claim to the possession of *unacquired* knowledge—a kind of knowledge, we mean, derived from neither reading, observation, experience, nor oral intercourse, nor indeed from any other source without, or apart from, himself. It would seem to be made up exclusively of *internal*, *spontaneous*, and *un-labored-for* ideas or fancies, for which he is indebted not even to *himself*, but to a peculiarly bounteous endowment of Nature, which the capricious goddess has bestowed on him, but on nobody else. The following anecdote may serve as a farther illustration of our meaning.

About twenty years ago, (a few years perhaps more or less,) Dr. Dunglison arrived by invitation in the United States, as one of the Professors in the University of Virginia. Soon after that period the writer of this article had the pleasure of an introduction to him, and found him confident in the belief that, though he had scarcely perhaps, at the time of the interview, felt an American pulse, or made a single visit to an American sick room, he had, notwithstanding, a complete knowledge of American diseases, and was perfectly competent to their treatment and cure, and also to become an instructor in them to others.

Nor is this statement made in the form of an inference from a casual conversation. It is the substance of an opinion that was frankly avowed. And although, during the conversation, the Professor himself was perfectly calm, courteous, and self-possessed, one or two of his colleagues deported themselves differently, when the correctness of the belief was delicately questioned. An insinuation quite civilly made, that an English physician *might* be surpassed and even instructed, in his profession, by an American, appeared to be regarded in the light of an indignity. And thus was the conversation suddenly interrupted, or the subject of it changed. Under this head we shall only add, that we have known intimately many European physicians of great respectability, who had migrated from their own country, and become resident practitioners in this. And Professor Dunglison excepted, we are, at this moment, unable to call to mind a single one, who did not frankly confess, that, on his arrival in the New World, he found it *really new* in most things; and that, in particular, he found himself a stranger to the successful treatment of American diseases, until he had become acquainted with it by experience. And, in the nature of things, the acknowledgment could not be other than ingenuous and veritable.

If the foregoing strictures and disquisitions be founded in truth and justice, (and our aim has been conscientiously to that effect,) it necessarily follows that in neither a *scientific*, a *literary*, nor a *practical* point of view, has the profession been improved by the volumes we are examining. Is it then to be hence inferred, that medicine is in no way benefited by the work? We answer, no. A few useful purposes in the profession, the publication creditably subserves. Some of these are the following.

In the first place, it makes a part of the great scheme of *labor-saving* and *power-giving* means and contrivances of the day. It brings

together and presents to its readers, under a succinct and condensed form, a vast amount of medical matter, which no physician could collect for himself, without a most tedious and toilsome examination of detached works; and which, from a want of leisure and books, the great body of physicians in the United States could never collect. By its copious references to authorities, it serves to those who are solicitous of further information on given topics, as an index to libraries to which they may have access. Nor is this all.

It presents to the physicians of the United States a very valuable and praiseworthy example of literary research, ambition, and perseverance. And were that example judiciously analyzed and deciphered, improved and followed out, it might be rendered the most profitable attribute of the book. It furnishes a lesson replete with instruction, as to what may be accomplished by labor alone, without the aid of *genius* or *talents*. For, in the preparation of his system of "Practice," the Professor has not made the slightest manifestation of either. He has shown himself to be, in the strict and entire meaning of the phrase, a "*working man*," possessed of the excellent and essential qualities of assiduty, faithfulness, and perseverance, but, in our view, of little or nothing higher. And the example he has thus put forth ought to prove exceedingly useful and encouraging to all moderately gifted men, who constitute an immense majority of the Caucasian race itself, and the entire mass of all the other races. Even among the Anglo-Saxon and Anglo-American Caucasians, who are in no small degree superior to the other varieties of men, the proportion of the true-highly gifted is extremely small. And even of that number but few employ their talents to the best effect. The reason is plain. To such persons *labor* is irksome and repulsive, and *pleasure* fascinating. They are mostly an intractable compound of opposites and extremes. Hence, trusting to their high natural endowments, for the attainment of their wishes, and the gratification of their ambition, they reject the disagreeable and cling to the pleasing. Hence also they fail of that eminence they might easily attain, and of that usefulness, in whose production they might be greatly instrumental.

By the compilation of his "Practice of Medicine," then, we repeat, Professor Dunglison has done much to gratify and encourage, the great body of moderately gifted men. He has practically shown them, what it is important they should know, that by *industry*, *zeal*, and *perseverance alone*, without the aid of mental powers above *medioc-*

rity, much may be done to acquire reputation and reward ambition. For that, in the estimation of a great majority of that portion of the Faculty of our country, who may read his "Practice," his reputation will be enhanced by it, is hardly to be doubted.

In the case before us, therefore, the Professor's example and good fortune will do much in confirmation of the great and important truth, that, where nature, merely by her choice and abundant endowments, confers distinction and its concomitants on *one* man, active energy, enterprise, and perseverance, confer them on thousands. Hence, were this proposition rigidly analyzed, and carried out to its full extent, it would clearly reveal and establish the fact, that men are the makers and marrers of their own fortunes; that they have the control of their own destinies, far beyond what is generally admitted, and that they are therefore to themselves the only FATE to whose influence they are subjected, and whose *fiat* they are positively compelled to obey. So true is this, that those who labor for standing and distinction resolutely and steadily, without faltering or flinching, and under the direction of common sense and sound moral principles, rarely fail in the attainment of their purpose.—One topic more, and our task will be suspended for the present, if not finally closed.

As this article, if read at all, will be read chiefly by the physicians of the West and South, it may probably be expected of us that we should offer an opinion more definite and positive respecting the fitness or unfitness of the volumes before us to subserve, *in particular*, the interests of practical medicine, in the Mississippi Valley.

To this expectation, supposing it to exist, we can reply, *to our own satisfaction*, in a single sentence. Others, of course, notwithstanding all we have said, or can say, will exercise their right to judge for themselves.

After the most strict and impartial examination into the matter and character of the work in question, we are unable to discover in it the shadow of fitness to benefit practical medicine in the Mississippi States. It is a subject of regret to us therefore, that, as honest and conscientious reviewers, we cannot cordially recommend it to western patronage. There yet exists as deep and positive a necessity for an able and efficient work on the nature and treatment of western diseases, as there did before Dunglison's "Practice" was committed to the press; or as there would have done, had the Professor never delivered a lecture nor wielded a pen.

It was our intention to offer a few remarks on one or two points of doctrine maintained by our author in the volumes before us. But the unlooked for length to which this article has already extended, compels us to postpone the completion of our purpose until another occasion.

C. C.

Selections from American and Foreign Journals.

Malformation of the Shoulders.—Last week some observations were made on the general condition of Mr. Nellis, the man without arms, with reference to the power acquired by the toes in the performance of motions that would at first seem impossible to be accomplished by any other means than the fingers. Another opportunity has occurred for a re-examination; and it may possibly subserve the interest of some anatomist or physiologist, if we give the following continuation of last week's notice.

In consequence of being destitute of arms, there not being a single vestige of an arm-bone connected with the shoulder-blades, a peculiar control from early infancy has been acquired over the muscles of the mouth, altogether new and surprising. It reminds one of Lamarck's notion of the manner in which animals obtained their forms—from the operation of the force of desire. The elephant, for example, had a short neck, and having a strong desire to clip the tender grass at his feet or the foliage above his head, kept on desiring from age to age, till finally the upper lip was actually elongated into the now characteristic trunk, dragging the nose in its long train. So it would be, were the doctrine true, in regard to the armless descendants of Mr. Nellis, should there be any; the period would arrive when the lips would take the form of a proboscis!

A new labor devolves upon all the facial muscles, and especially upon those about the forehead. This is observable in holding on the hat, throwing it off, and so on. A spinal disease put a stop to Mr. Nellis's growth in his thirteenth year, and he only measures four feet five inches, and weighs but eighty-four pounds. Yet he is quite strong, especially with the teeth and jaws. A fifty-six is easily raised and thrown some feet, by the teeth, which are large, sound, and well set.

Singular as it may appear, in infancy he managed to creep about as well as other children. There is a peculiarity in his vision, worth the special attention of philosophical visiters. It is this: although the most delicate cuttings in paper are executed by the toes, which necessarily removes the work to a considerable distance from the eyes, his vision at the point of the scissors is minutely distinct. This, like the training of the muscles of the lips and feet, was established by the law of necessity;—nature accommodated the organ to the circumstances of the individual. Objects, such as a book, placed at the usual focal distance, soon produce a painful sensation.

One of the anatomical singularities in Mr. Nellis's organization, is that there are no rudimentary arms. The glenoid cavities are, apparently, completely formed, feeling under the finger as though the ball of the humerus were but just slipped aside. The acromion processes jut out boldly, like a protecting roof, on both sides, and on them, as on two projecting hooks, is hung his coat. All the muscles of the scapula are perfectly developed, and he has such perfect control over them too, that he can throw off a coat or re-adjust a garment to its proper place, about as readily as people who have hands.

These few facts in relation to the actual condition of the unfortunate individual to whom they relate, may be of use hereafter to the physiologist. At all events, it would be quite inexcusable not to notice an anomaly so striking. Mr. Nellis says that he cannot imagine any use for a pair of arms, and therefore manifests no regrets that he is without them.—*Boston Med. and Surg. Journ.*

Treatment of Mesenteric Glandular Affections. By Dr. Charles Clay, Manchester.—Under the name of marasmus, and as an affection of childhood, diseased mesenteric glands are very common, almost daily coming under the notice of medical practitioners, *particularly in manufacturing districts*, where laxity of fibre and much constitutional debility prevail, and where the habit, diet, &c., contribute considerably to its encouragement. But as a disease of puberty or adult growth, comparatively little is known; yet it is certain that a disease strictly analogous to the marasmus of childhood is very prevalent, much more so, indeed, than is generally admitted, and annually carries off many whose deaths are often attributed to very different causes, even in other than manufacturing districts. Three-fourths of the common

cases of atrophy are attributable to glandular obstruction only. From the many cases that I have observed during twenty years practice, and in the treatment of which I have been engaged, a few practical observations with respect to it may not be unacceptable, particularly as there are few cases that call forth more patience from the medical attendant, and certainly none that are productive of greater disappointment, rendering it in the highest degree necessary to make a correct diagnosis, which having been made, a long and steady perseverance in remedial measures is to be pursued. I say a long and steady perseverance, because the nature of the case particularly requires it, not only on the part of the medical attendant, but also of the patient. In all cases of long-continued disease there is an aptness to run from one practitioner to another, vainly seeking that immediate relief which cannot possibly be given. If a correct diagnosis be once formed, and the slightest benefit obtained, every confidence should be placed in the party, and perseverance should be the motto of the invalid.

The treatment of mesenteric affections is so often confounded with that of atrophy from other causes, that great errors have arisen, which it is the more necessary to point out. No gland can be enlarged or indurated by disease without obstructing the operations of nature, for which those glands were especially formed; it is evident, therefore, when such indurations are ascertained to have taken place, our attempts at relief should be directed to the chief cause of mischief. Where glandular obstructions exist it is evident that the quantity of chyle must be limited in proportion to the extent of diseased structure, and in the same proportion the system suffers from emaciation, not receiving the supply of nutriment sufficient to maintain the system in its former healthy state; consequently, this disease is found in every stage, from the slightest obstruction to the entire obliteration of the glandular action; no chyle poured into the blood, the system is emaciated in the extreme; the limbs or parts most distant from the centre of circulation become œdematous, and death immediately follows.

If, then, glandular obstruction be the diagnosis, what is to be done? This leads me to make a remark or two on some of the general axioms of treatment pursued in such cases, with a view to point out their errors and substitute a plan that the writer has often pursued with considerable advantage.

Dr. Thomas observes, "That in all cases of atrophy the

patient should make use of food that is nutritive and easy of digestion, and it should be taken frequently, but in small quantities at a time." I fully agree with him as to the kind of food, but maintain that to feed an atrophic patient *frequently* is a very mischievous doctrine, calculated to increase rather than lessen the evil: that the whole of the alimentary canal is much deranged in atrophic cases is certain, and the greatest caution is required in the selection of such food as will not require too great an effort for the digestive function; but for that organ to be continually stimulated by constantly taking food is decidedly injurious, the stomach requiring rest from its usual operations as much as any other organ in the body. The repose of the digestive function is necessary to the well-being of an invalid, and in none more so than in atrophic cases, when it is evident, however much chyme may be formed, no more chyle can pass into the system (in consequence of the indurated glands), if the patient be eating every hour in the day, or if only allowed to indulge three times in twenty-four hours; there can be then no advantage in debilitating digestion by frequent meals, whilst the disadvantages must be apparent to every one on the slightest reflection, viz., it increases general debility, and prevents the due operation of medicine calculated to resolve the existing indurations and consequent obstruction in the mesenteric glands. Impaired digestive function is the consequence, *and not the cause*, of the prevailing disease in this case. The real disease should be primarily attacked with the necessary caution of not impairing the powers of digestion further; it will then be evident that all those symptoms necessarily arising from such causes must give way as the cause which provoked them vanishes. The too frequent exhibition of, and too much dependence on, powerful tonics, appears to me contrary to the diagnosis of mesenteric glandular affections, for it must be useless to waste time in the endeavor to improve the function of the stomach by tonic medicines, which, though considerably impaired, *is capable of digesting more food* than can be converted into chyle. The symptoms of indigestion we so often find as attendants of glandular obstruction, are often increased to a very considerable degree by the ill-advised and constant taking-food system.

Very many cases of this description are treated in respect to the miseries of indigestion, whilst the glandular affection is either totally lost sight of, or treated merely as a secondary matter of minor importance, whereas the very reverse ought to be pursued. The constant stimulus kept up by tonics, in

an emaciated system (extremely sensitive and easily excited), counteracts every effort at reducing glandular induration; and this is rendered still more injurious by wines and other stimulating drinks which have been recommended. Such a mode of treatment might be adopted in the common forms of scrofula with less objection than in mesenteric affection, but I must confess *even in those* I never perceived stimulants attended with any good effect. In atrophic cases, however, they are highly pernicious, although they are esteemed by some as scrofulous affections. When œdema takes place, diuretics have been advised; but as this feature is one pointing out the inevitably fatal termination of the case, such means can only hasten the event, being only another drain on the already debilitated system, without adding anything to the supply.—Should any means adopted prove successful in restoring the glands to a healthy action by resolving the existing induration and restoring them to their original size, then there can be no mistake in the exhibition of tonics, freely adopting every means for restoring the physical powers of the system.

The treatment which I have found most effectual, and which I do not advance on mere theory, but from twenty year's close observation, is the use of a medicine that is generally allowed to be almost a specific in diseases of the glandular system, and that in doses so small as not to excite the disturbance of the digestive organs, combining such means with milder tonics just sufficient to keep the system from sinking any lower, without any anxiety for increasing the physical powers, until the indurated glands may have been restored; under such circumstances I commence by giving the following:—R. Tincture of iodine, gtts. xxx.; Fowler's solution of arsenic, gtts. xxv.; infusion of colombo or gentian, ʒ vi. M. Let one-sixth be taken three times a day.

As it sometimes happens that the solution of arsenic produces pains in the head, I occasionally omit it in the mixture for the space of two or three days, after which it is resumed. By persevering some time steadily with this mixture, I have found the worst cases much ameliorated, and life considerably lengthened, whilst many have been entirely restored to health; but as glandular resolution is of itself an extremely slow process, so it requires both perseverance and confidence on the part of the invalid, and great patience from the medical attendant. It is also necessary in the progress of cure to affect the system very slightly with mercury once or twice, and in some cases of extensive disease of long standing even three times with great advantage, by which means the absorbent vessels

are stimulated into freer action, and the effects of the iodine seem to be improved by it. When it is requisite to give mercury, I prefer affecting the system as rapidly as possible by very small doses of calomel very often repeated, as—R. Calomel, grs. ij.; crumb of bread, enough to make twenty-four pills. Take one every hour until the mouth is affected.

The advantage in this is, that the desired effect is frequently produced within twenty-four hours, when the iodine mixture can be resumed (which it is necessary to omit while the effect is being produced). This plan, if strictly attended to, is one that I can recommend with confidence as a safe and effectual one, applicable to every case of glandular induration, and unsuccessful only in cases too long neglected, where the action of the glands is almost entirely obliterated. The diet should be strictly such as to afford the greatest quantum of nourishment with the least possible exertion of the stomach, to be well masticated, mixed with as little fluid as possible (with the exception of milk), and particularly to avoid those of a highly stimulating character, such as wines, spirits, and fermented liquors: to let a space of at least six hours elapse between taking food, and even then the stomach should not be overloaded. These rules are imperative to the well-being of the patient. Exercise should be of the gentlest description; why horse exercise should be so highly spoken of by many, I cannot conceive; in may instances I have seen it the very reverse of gentle; only fancy a weak, emaciated female tugging at the reins, and urging forward a stupid, rough-paced animal with an exertion highly injurious; unless the adviser would go farther and say the kind of horse he recommends, he might as well send his patient to the treadmill: unless, then, the horse is a very suitable one, I am convinced the patient would progress better without such exercise. Where it can be procured, and weather permitting an airing in an open carriage, or a gentle walk, is to be preferred; if, on the contrary, the weather is unfit, a swing rocking horse, or exercising chair, are very good substitutes; the mind to be kept cheerful, free from extraordinary excitements, occupied rather on pleasant trifles than on subjects requiring reflection. The atrophic cases of manufacturing districts, however, have but little comfort at command; still I have seen many restored under almost every disadvantage, and am anxious the plan should have a more general application, that its merit may be fully and fairly tested.—*London Lancet.*

Fracture of the Neck of the Femur within the Capsule—Osseous Union.—An example of this is related by Walter Jones, Esq. in the sixth volume, N. S. of the *Medico-Chirurgical Transactions.* The subject of it was a man upwards of 80 years of age, who, after a fall in Oct. 1838, exhibited all the symptoms of fracture of the neck of the femur. He so far recovered as to be able to move about with a stick; the limb was shortened about an inch and a half, and the foot much everted.

The following remarks by Mr. Stanley are interesting:

"The history of the case is clearly that of fracture of the neck of the femur; the appearances of the bone show that there has been a fracture which has re-united by an osseous medium; and the direction of the fracture is such as, in my opinion, can permit no doubt that it was confined to the portion of the neck of the bone covered by synovial membrane; consequently, that it was wholly within the capsule. The fracture extends through the basis of the head of the bone in the line of its junction with the neck. As in other cases of the same kind, great part of the neck of the bone has disappeared, and, in consequence, the head is proportionately nearer to the trochanter major and shaft of the bone; its re-union has, in fact, taken place in part to the remaining portion of the neck, and in part to the shaft. This union is certainly osseous. In addition to the first maceration of the bone with its surrounding soft parts, it was subsequently immersed for several days in a strong solution of carbonate of potash, and one-half of the bone has been boiled in water for three hours without the slightest yielding perceptible in the line of the fracture.

"The specimen is preserved in the Museum of St. Bartholomew's Hospital."—*Am. Jour. Med. Sci.*

Foreign Body in the Air Passage for Nine Months—Expulsion—Cure.—M. Malshieurat-Lagemard communicated to the Academy of Medicine of Paris an interesting case of this character. The subject of it was a woman 58 years of age, vigorous constitution, who when first seen by M. M. had been laboring under a cough for four months. At the commencement of the attack the fits of coughing were violent and accompanied with a sense of suffocation. When she consulted M. M. "the cough recurred every eight or ten days, lasted for one or two minutes, and was unaccompanied with fever or expectoration. The patient could assign no cause for

the attack, nor was any thing learned by auscultating the thorax. The symptoms continued without aggravation, or mitigation, and finally, the patient expectorated along with some mucus, a rough, yellowish calculus, about the size of a filbert nut. On sawing the calculus, it was found to consist of calcareous matter, encrusted on a cherry stone. The patient then recollected that the first attack of cough occurred when she was eating cherries, but if she experienced any sensation of suffocation at the time, it was so slight as to have quite escaped her memory. She remained perfectly well after expulsion of the calculus."

In a case related in the *Ephem. Nat. Cur.* a cherry-stone remained in the air passages for a year, and was then expelled by coughing, encrusted by tartar.—*Am. Journ. Med. Sci.*

Case of Inflamed Hernia.—Prof. Williams exhibited to the Surgical Society of Ireland (Nov. 27, 1841) a very interesting pathological specimen, taken from a patient who had died a short time before in the city of Dublin Hospital, 76 hours after having been operated on for strangulated inguinal hernia. The individual in question, about 60 years of age, had labored under inguinal hernia of the right side for a period of six or seven years. He gave an unsatisfactory account of the antecedents of the case, but distinctly stated, that for the last four or five years he had worn a truss, which, however, retained the hernia very imperfectly, and that he frequently experienced much inconvenience from the hernia descending under, and being compressed by the pad of the truss. On admission to the hospital, he labored under mild symptoms of strangulated hernia, presenting very little indeed of urgency. Being a person of very limited intelligence, it could only be collected, in addition to what has been already stated, that he had been five or six days without having had a fæcal evacuation, during which time the hernia, previously reducible, could not be returned; he had kept his bed three or four days, and had vomited four or five times at long intervals. The hernial tumor was about half the size of the shut hand, it was by no means tense; and, when handled, the patient complained of uneasiness rather than of pain, and that to but a slight degree; there was very little abdominal tenderness on pressure, and the patient was able to lie on his back with the lower extremities stretched out at full length. The pulse was about 90, and

rather small; tongue furred and moist; there was a good deal of thirst; and drink, which was only allowed to be taken in small quantities at a time, did not excite vomiting. The hernia could not be reduced, though, on attempting to do so, a considerable quantity of flatus was obviously expelled from the protruded bowel, and the tumor became more flaccid, and apparently slightly diminished in bulk, circumstances which, coupled with the (almost) absence of pain on pressure, caused the taxis to be persevered in longer than would otherwise have been done. Under these circumstances, small doses of sulphate of magnesia were administered by the mouth, and an enema directed to be thrown up every fourth hour. Two or three small fæcal evacuations occurred during the night, and, in the morning, matters were little altered, except that the patient stated, that he found himself, on the whole, more comfortable. Shortly after the visit, however, he began to vomit whenever he drank, and the tumor became painful, tense, and decidedly tender on pressure. Dr. O'Beirne's tube was now passed up the rectum, but as it failed to give relief, and the symptoms were rapidly growing worse. the operation for strangulated hernia was performed by Mr. Williams, in the evening.

On opening the hernial sac, which contained no fluid, and which was not adherent to the bowel at any part, the finger could be passed all around the neck of the sac, and through the inguinal canal fairly into the abdomen. The inguinal canal was very short, and its obliquity had quite disappeared, as often occurs in old hernia, according to a mechanism too well known to need description. There was, in fact, no stricture to free; no pressure or constriction was exerted by the rings, the inguinal canal, on the sac, or any portion of the intestine. Even now, however, the protruded bowel could not be returned until pressure was exerted on it for, perhaps, a couple of minutes; the obstacle to its return consisting in the condition of the intestine itself, its surface being covered with a thick layer of coagulable lymph, which rendered it rigid and unyielding; it was deemed essential, however, to return the bowel, as it gave the sensation to the touch, (which subsequently proved erroneous,) of containing some indurated mass, supposed to be fæces, in its cavity; shortly after the operation, the bowels were freely moved. The symptoms of peritoneal inflammation, however, continued despite the treatment, which chiefly consisted in the internal and external exhibition of mercury, and the patient died seventy-six hours after the performance of the operation.

On dissection, the coats of the portion of the intestine which had been protruded (the ileum about twelve inches from its termination) were found to be enormously thickened—in some parts fully to the extent of a quarter of an inch. The proper tissues of the bowel were not hypertrophied; the thickening depended on the effusion of coagulable lymph, partly situated on the serous surface of the intestine, partly in the subserous cellular tissue. In consequence of this condition of things, the calibre of the intestine was diminished to less than a fourth of its natural capacity; and it was the deceptive sensation thereby communicated to the touch which had led to the belief that indurated fæces were impacted in the bowels. The serous coat of the intestine was inflamed, and covered at points with gelatinous lymph; but, as manifestly appeared from the inspection of the preparation, the intensity of the inflammation diminished as the distance increased from the portion of intestine that had constituted the hernia. The inflammation had evidently commenced at that point, the morbid alterations being there at their maximum, and had thence extended, becoming less intense as it spread. The parietal layer of the peritoneum was not inflamed. A portion of the abdominal parietes and scrotum, comprising the entire of the sac and of the inguinal canal, had been removed, and were exhibited, whence it clearly appeared that no stricture or compression could have been exerted on the intestine by any of these structures.

Professor Williams said that it might be collected from what he had stated, that he considered the operation had been in this case, to say the least, useless. He nevertheless, gave the case publicity. This had clearly been a case of *inflamed* hernia, and not a case of *strangulated* hernia. But how was this difference to be diagnosed during life? He confessed he did not know. The diagnosis of this distinction, a most important one, had yet to be established. In this case, the point of departure of the inflammation was, beyond all dispute, the protruded portion of the intestine; the preparation placed that beyond doubt, and yet, till within a few hours of the operation, that portion of the intestine was, he might fairly say, almost indolent.—*Am. Jour. Med. Sci.*, from *Dublin Medical Press*, Dec. 29, 1841.

Malgaigne *on Pseudo-Strangulation, or Simple Inflammation of Hernia.*—Strangulation is said to exist whenever a hernia cannot be reduced, and when pain, constipation, vom-

iting, and hiccup are present. Should these symptoms progress rapidly, the strangulation is called inflammatory; if slowly, the strangulation is said to be from obstruction (*par engouement*). In either case, an operation is judged indispensable, so soon as the symptoms have acquired a certain degree of intensity. Boyer says, that we should operate if the symptoms continue to increase; and, in old or weakly subjects, he advises us to operate within the first three or four days.

Here we may ask, did Boyer reflect on the true danger of the operation, when he laid down such rules? Assuredly he did; but, with Pott, he thought "that the operation for strangulated hernia presented, of itself, no danger." In order to determine how far this opinion was founded on fact, I have noted all the operations performed during five years (1836–41) in all the Parisian hospitals, and I find that in 183 cases there occurred no less than 114 deaths. Again, in old people, (from 50 to 80,) on whom Boyer would have us to operate so promptly, I find that 70 out of 97 died. Obstruction, Boyer informs us, is produced by a collection of hardened fæces in the hernial tumor, and this frequently occurs in old hernia. But, we may ask, is this latter a fact? For my own part, I may say, that I have examined more than 3000 cases of hernia, without observing the circumstance on which Boyer insists. At Bicêtre, I have examined two of the most voluminous herniæ on record; one tumor measured 10½ inches in height, and 22 inches in circumference; the other, 8 inches in height, by 23½ in circumference; but in neither was there any trace of fæcal matter. Besides, we can have hard or fæcal matter in the large intestine alone, and the presence of the latter in a hernial sac is not one-twentieth as frequent as that of the small intestine. Hence, in 95 out of 100 cases, this obstruction, such as it is described in books, is materially impossible; it can only occur when the hernia is formed by the large intestine. As regards the latter case, I can affirm that I have never seen such accumulation of fæcal matter in any autopsy that I have made; and, having consulted authors, I find but a single example in which this collection had really taken place.

The cause, then, of this species of strangulation is imaginary; so, I regret to say, are the symptoms which we find detailed in surgical writings. I have myself been misled by the doctrines laid down. I once operated on a case of supposed strangulated hernia from obstruction; there was no obstruction, no strangulation, and my patient died. Similar errors of this kind have been committed by Pott, Dupuytren, and Sir

A. Cooper; and were all the cases published, we should have a long list of them. But is there any way of avoiding such errors? It seems to me, that some few rules of a simple nature may be established.

1. There is simple, non-inflammatory strangulation, which produces gangrene in a few hours.

2. We have simple inflammation, which is of frequent occurrence, and generally limited to the serous lining of the hernia.

3. Finally, inflammation of the whole mass of the tumor; this latter circumstance, however, is generally a consequence of one of the former conditions, and may be excited by the stricture, or by frequent attempts to effect reduction.

Obstruction of the intestine is a mere creation of the fancy; it is inflammation of the serous lining of the hernial tumor which has been mistaken for it. This peritonitis is one of the most frequent complications of hernia, and surgeons have probably overlooked it from not having sufficiently studied hernial tumors in their simple state. It may exist under the forms of adhesive or suppurative inflammation; the adhesive is often slight, and indicated by passing colic, or even by symptoms of indigestion, which sometimes go so far as vomiting and hiccup; the tumor is now irreducible, and the taxis will only aggravate all the symptoms; but rest in the horizontal position, and cold topical applications, will often suffice to effect reduction; in more severe cases, it may require several days or weeks before the inflammation is sufficiently reduced to allow of the return of the intestine. When hernial tumors, in this state, are reduced, nothing generally remains, except some thickening and irregularity of surface at the lower part of the sac; should the tumor not be reduced, then adhesions take place.

The suppurative inflammation is infinitely more rare, and can scarcely be discovered, except after operation or death of the patient. How are we to distinguish this inflammation of the peritoneal membrane from true strangulation, and what should our practice be? The following are the results of my experience on these points.

1. In no case of old and voluminous hernia, where bandages have not been employed, or have been left off for a considerable time, do we find real strangulation; the openings are much larger than the neck of the hernial tumor, and strangulation cannot occur. This is the result of all my observations on the living and dead body.

2. In cases of simple epiplocele, inflammation of the perito-

neal membrane is what is commonly taken for strangulation; I say *commonly*, for I would not deny that strangulation may occur; I have never seen a case, nor have I found an authentic one in surgical works.

3. Hence, in the two cases just mentioned, the operation is contra-indicated; the taxis may be tried at the origin or decline of the inflammation, and the treatment should be purely antiphlogistic.—*Am. Jour. Med. Sci.*, from *Prov. Med. and Surg. Journ.*, Oct. 2, 1841.

On the Stinging Organs of the Medusæ.—The severe effects produced by these animals are generally noticed in all extended works on poisons. Dr. Wagner, of Gottingen, remarks, that it has not yet been ascertained whether the stinging or burning power of these is to be ascribed to a corrosive liquid or to a mechanical injury. He imagines that his examinations, made at Nice and Villafranca in 1839, will aid in deciding the question.

The origin of the stinging is to be referred to the external surface of the skin. This has a beautiful, brownish, violet and reddish color in various parts; and when separated, which is easily done, there appears the homogeneous, jelly-like substance, which constitutes the real body of the animal. Where the red spots occur, we find, after the skin is detached, round elevations or inequalities like warts.

Between the red grains of pigment are to be observed round balls or bubbles, out of which, frequently, by the aid of a powerful magnifying power, (for this whole organization can only be recognized by the microscope,) fine threads are seen to project. These threads, spirally rolled up, often come out of themselves, but always do so on the application of a slight pressure. The balls or capsules, which contain these threads, are very loosely attached and easily fall, and are rubbed off along with the slime when the medusa loses its skin; they are found in quantity, as are also the threads themselves in what is termed the stinging slime of the medusa, as is easily ascertained when these animals are kept in vessels.

The slightest touch of a medusa causes a perceptible burning sensation, and this is more or less severe, according to the vigor of the animals. They only sting from parts of their bodies where the epidermis is preserved. Dr. Wagner never experienced the sensation when he came in contact with portions in which the epidermis had been removed. In his case, a burning sensation was felt in from a few seconds to a minute

after contact; after a few minutes, a slight redness appeared in his case, and then a simple, lentil-shaped elevation; but, more frequently, three or four near one another. The appearance sometimes resembles nettle-rash. The pain generally soon ceases, but it lasted half a day with one of the party, Dr. Will, and, after eight days, a redness was still perceptible.

The internal substance of the body (jelly) never stings, nor does any part, where the pigment spots, the capsules, and the hairs are wanting.

Dr. Wagner thinks it probable that the stinging has a mechanical and chemical origin, and that the parts above described are poison-organs.—*Amer. Jour. Med. Sci.*, from *Edin. New Philosophical Jour.*, Jan. 1842.

Recovery from Tubular Pregnancy by the artificial production of Abortion.—A woman who had borne three children began to complain in the month of May, 1834, of pains in the lower part of the abdomen on the right side in the situation of the ovary. She soon felt a small tumor in this region, which, from the size of a citron, in six weeks acquired that of a child's head. The pain stretched up the back, and down the right thigh, and became every day more insufferable, so as, at last, to deprive her of sleep. Fever, constipation, slight jaundice, and general dropsy, were gradually induced. She believed herself to be again in the family-way, both from the menstrual secretion having been stopped for eleven weeks, and from feeling those peculiar sensations she had experienced in her former pregnancies. Professor Ritgen discovered that the lower part of the uterus was somewhat enlarged, that the orifice was directed to the left side, and that a tumor was in close contact with the upper part of the uterus, and was movable. After a careful examination of it, both from the vagina and the rectum, but especially from examining it by means of the stethoscope, and hearing distinctly the *bruit de soufflet*, he arrived at the conclusion that it was a tubular pregnancy. He, therefore, with the view of aborting it in its early stage, together with the use of enemas, prescribed first Glauber's salts, and afterwards pills composed of the ergot of rye and extract of aloes, covered the lower part of the abdomen with cataplasms, and put a seton in the neighborhood. Vomiting was first excited, then followed contractions of the uterus and of the tumor; black blood flowed from the vagina, at first spa-

ringly, but afterwards in larger quantity, and mixed with clots and shreds, resembling portions of the fœtal membranes. By the fourth day after this, the tamor was found to have diminished considerably in size, and the pain was greatly abated; but a year and a half elapsed before it completely disappeared. Blood was discharged from the vagina for nearly nine months. She has not again become pregnant.—*Ed. Med. and Surg. Jour.* from *Gaz. Med De Paris*, May 8, 1841.

Tobacco in Hysteria. By Dr. J. H. Thompson, of Salem, N. J.—August 19, 1839.—Frances S., æt. 22, unmarried, dark complexion, black hair, moderate embonpoint, about the ordinary height, after having performed an almost incredible day's work, while her clothes were literally "soaked" with perspiration, sat down, with her bare feet resting upon a cold pavement, and continued in this situation for half an hour or more, until she began to "feel strangely," and as if something was "rising in her throat." She walked into the house and was immediately attacked with violent hysterical convulsions. I saw her at eight o'clock, P. M., about an hour after the attack. She was then upon a bed, surrounded by a number of persons, who, as usual, appeared to think the convulsions could be arrested by *main force*, since their utmost efforts had been directed to the injudicious and unsuccessful attempt of preventing any motion on the part of the patient. Her arms were thrown violently in every direction; her head was forced backward, and with the body formed a complete arch. The muscles of the neck and trunk were under rigid tonic contraction, while those of the lower extremities were not at all affected. The face was swelled; the eyes firmly closed; jaws could be opened with difficulty, but were quickly closed with a loud "snap." Some abortive attempts were made to introduce medicine into her stomach; her feet were placed in stimulating pediluvia, and cold applications were made to the head which was extremely hot. No impression had been produced upon the disease. I tied up her arms and made a free opening into the vein, from which the blood flowed in a large stream. No regard was paid to mere quantity, its effects alone were considered. In a short time the convulsive motions ceased; the face began to lose the dark flush which had overspread it; the muscular system gradually relaxed, and the first intelligible words spoken by the patient since the attack were, "I feel sick." About forty ounces of blood had been abstracted.

20. Patient slept a little last night. Feels this morning, to use her own expression, "as if every bone had been broken and every joint dislocated." Says the catamenia appeared a week ago, and were as usual. Bowels were operated upon by enamenta. Still feels the globus hystericus occasionally in a slight degree. Antispasmodics freely administered during the day. At about the same hour as on the preceding day the patient was again attacked. Assafœtida, ʒ j. with 60 gtts. of tinct. opii, was given in enema, and repeated two or three times without effect. Pulse strong; vein again opened; with the loss of 20 ounces of blood, the convulsions ceased.

These attacks occurred at the same hour the three following days, notwithstanding the liberal use of almost the whole list of antispasmodics, and other remedies, amongst which quinine was given, as the disease appeared to have assumed a periodical character. The convulsions appeared to increase in violence: they lasted for several hours, and left the patient in an extremely exhausted condition. During the attack, her countenance was so altered in appearance and expression that her most intimate friends could not have recognized her. Her throat was the seat of chief distress; desperate and continual efforts were made, as if to tear away something that was chocking her. A distressing "clucking" noise was made, as if the glottis was spasmodically opened and closed. Under these circumstauces I determined to make a trial of the powers of tobacco. On the next attack some leaves were procured. One was placed for a few minutes in hot water, and then spread over the epigastric region of the patient. In fifteen minutes the hysterical symptoms had all disappeared. The patient felt sick and continued so for some time, but did not vomit. At the usual hour on the following day, and also on the day after, she was again seized, but on both occasions the attack was arrested *in limine*, by the tobacco, and returned no more. No other means were employed. The patient slowly returned to her former state of health.

This is but a solitary instance of the use of tobacco in one of the Protean forms of this disease, and I am by no means disposed to place much reliance upon isolated cases. The facts are given as they occurred. It will be for future experience to confirm the efficacy of the remedy, or to reject it as unworthy of confidence in this disease.—*Am. Jour. of Med. Sciences.*

Idiopathic Hydrophobia. By John Kimbell, M. R. C. S. L.—W. K., aged 24 years, of a bilious and lymphatic temperament, has, during the last month, suffered from occasional attacks of palpitation of the heart, occurring generally in the night, and invariably followed by profuse perspiration. On October 4, 1841, he rode a distance of fourteen miles, and, on arriving at the end of his journey, about 12 o'clock A. M., he was seized suddenly with great difficulty of breathing, pain over the region of the heart, and painful sensations over the chest. The paroxysm continued for a few minutes, when the dyspnœa and pain gradually subsided; he afterwards ate a good dinner, and appeared as well as usual, until about eight o'clock in the evening, when all the symptoms returned with greater violence than before, and to so distressing a degree did the dyspnœa increase, that there appeared to be imminent danger of suffocation. He was now bled to eighteen ounces, but without any manifest relief, and the operation was repeated in three hours to the amount of six ounces, which had the effect of considerably relieving the pain. About 5, A. M. October 5, I saw him; he could not speak, although conscious of what was passing around him; I was informed that he had had violent convulsive movements of the arms, which lasted nearly an hour, and he now appeared to be suffering from a spasmodic constriction about the glottis and pharynx, causing extreme difficulty of inspiration, which had a peculiar crowing character; he had likewise a great desire for water, and complained much of thirst; no sooner, however, was this fluid brought into his presence than it was obliged to be withdrawn; the sight of it caused an alarming increase of pain about the larynx with a horrible feeling of suffocation, but with the removal of the water the symptoms became ameliorated.—From so many hydrophobic symptoms being present, I was apprehensive he might have been bitten by a dog, and questioned him upon the subject very closely, but to all my interrogations he shook his head negatively. During the intervals of ease, his pulse was full and soft, and averaged eighty beats in a minute, his tongue was clean; the bowels were regular; and the skin of the natural temperature. Aware that there was predisposition to spinal disease, I examined the back, and found about the lower part of the cervical region, tenderness upon pressure, and I observed that this *pressure invariably* produced an exacerbation in all the symptoms, and of this I fully satisfied myself, and my patient likewise, by repeating the pressure three or four times. A blister was applied over this spot; it rose well, and he soon became able to

swallow. Doses of opium were given by the mouth, and an opium injection was administered *per rectum*. I should have stated that, from the commencement of the attack up to the present period, he has experienced a great difficulty in passing his urine, but none in voiding his fæces. 5th. Much improved in every respect, but when his head was raised the spasm was speedily reproduced. He had a constant smacking of his lips, and frequent twitches in his legs and feet; the right arm found partially paralysed. No headache; no confusion of intellect. 7th. Still improving. Spasms had entirely disappeared; he dould swallow fluids with the greatest ease; tongue clean; bowels well opened; secretions healthy: he can now be raised without suffering. The blister disharged freely. The dorsal region was rubbed with an embrocation containing croton oil, tartar emetic, &c., and quinine was given during the day, with henbane at night. From this period he gradually progressed, and at the end of the month was thought sufficiently improved to resume his avocation. One day, however, previous to his intended departure, he had a return of the dyspnœa, but in a much less degree than before. This was immediately treated with the application of leeches to the cervical region, followed by a blister, when all the symptoms soon vanished. He has two issues, one on each side of the cervical vertebræ, which discharged freely, and he may now be considered convalescent.

THE WESTERN JOURNAL.

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LOUISVILLE, JUNE 1, 1842.

MEDICAL CONVENTION OF OHIO.

The fifth meeting of this body began in Cincinnati, May 16th, at 10 o'clock, in the Hall of the Medical College. About 70 members attended, more than half of whom belonged to the city. Dr. Thompson, of Columbus, was elected President. Dr. Boerstler of Lancaster, late President, opened the sitting, and after his successor took the Chair, delivered an interesting discourse on the ætiological and therapeutic influences of heat and cold. A full narrative of the proceedings of this body, will soon come before the profession in a printed form. We shall, however, select a few matters from our own notes.

A resolution was passed inviting physicians from neighboring States to take seats as honorary members, with the privilege of participating in all the scientific exercises.

It was also resolved that no physician who is the author or vender of a patent medicine or nostrum, should have a seat in the Convention; which sound and salutary restriction we were sorry to see neglected in practice. If our conventions cannot be made up exclusively of

highly scientific men, they should at least include only those who technically belong to that *caste*, and have a degree of professional self-respect that will defend them against palpable empiricism.

While on this subject we may state, that a resolution was passed, censuring the practice now becoming so prevalent with clergymen, of recommending nostrums; and, also, that a memorial to Congress was adopted, praying that the law authorizing patents for medicines may be repealed.

We were happy to observe that a committee was raised to investigate the remote causes and prevention of the *chronic laryngitis* of public speakers, generally but improperly called bronchitis.

Among other resolutions, we may mention one condemning the use of iron chains and manacles, in the treatment, or rather confinement, of insane persons; which it seems is still practised in some of the asylums of the West.

We must not omit to mention, that a resolution, declaring it a professional duty for physicians to promote, both by precept and example, the present glorious reform in the abuse of intoxicating drinks, was unanimously adopted; and we are happy to be able to state, that in most of the hospitalities extended to the members, during the whole session, wine and other intoxicating drinks were not presented.

Dr. Thompson exhibited to the Convention some surgical instruments, which he conceived to be improvements on those previously used. One was a catlin with a concave back, which will apply itself to the bone; another a cataract knife, with the blade set at an angle of a few degrees with the handle; a third was a tourniquet entirely metallic, and designed to avoid venous compression.

Dr. Mussey offered to the notice of the Convention some specimens of fracture of the neck of the thigh bone within the capsular ligament, in which a cure had taken place by ossific union.

A resolution declaring it un-professional to attend families by the year for a stipulated sum, was voted down.

It was by resolution desired, that all the members of the next Convention report what they can from their own observations on the symptoms, pathological anatomy, and treatment of Bilious Fever.

The following request was ordered to be entered on the journal of the Convention:

Snake-bites. Dr. Drake respectfully requests the members of the Convention and the readers of its proceedings, to favor him with

such facts concerning the bites of our venomous snakes, as may have fallen under their own observation, or that of persons qualified to observe. He is especially desirous of learning whether the symptoms produced by the bite of the rattle-snake, the copper head, and the prairie rattle-snake, are the same; whether there is an annual recurrence of any of these symptoms; and to what extent confidence should be placed in the efficacy of those native plants which have been recommended as antidotes.

We have already spoken of the address of the late President, Dr. Boerstler, on leaving the chair; and we will now enumerate the reports and other papers which were read in the Convention. Two of these were by Dr. Harrison, one on the modus operandi of medicines, the other on fever; Dr. Mussey read a lecture on syphilis; Dr. Worcester on the diagnosis of diseases of the heart; Dr. Dawson a report on trembles and milk-sickness; and Dr. Boerstler, from Dr. Bigelow, a botanical description of some plants to which the former of those diseases has been ascribed; Dr. Thompson made a report in favor of mesmerism, which was accompanied by some mesmeric experiments; and during the discussion which followed, Dr. Drake introduced an account of some experiments recently performed by himself, which will be found in our next number; Dr. Barbee read a paper on the influence of malaria, in giving an intermittent character to certain diseases which do not depend on it; Dr. Wright a paper on certain prejudices against the medical profession; Dr. Hempstead a paper on the climate, topography, and diseases of the lower part of the valley of the Scioto; Dr. Atlee an essay on organic life, and Dr. Gross an experimental paper on wounds of the intestines.

All these papers, except the last, were referred to a committee of five members, to select from them such as they may deem proper for publication. We shall not, therefore, say any thing of them at this time, but await the apppearance of the publication, when we shall notice them according to our views of their originality and value. Dr. Gross' paper, which, by his own request, will not be published in the proceedings of the Convention, presented the general results of upwards of 40 experiments on animals, instituted with a view to ascertain the best kind of suture applicable in wounds of the intestines. Since the reading of the paper, we learn that the author has resumed his researches, and that we may shortly expect a full account of them for the pages of the Journal.

We congratulate our brethren of the western part of Ohio on the success of this, the first session of the convention held in the city of Cincinnati. It continued from Monday morning till Friday evening, two days longer than any of the other conventions; and the greater part of four days was devoted to the reading and discussion of papers. We cannot say that all these papers and discussions were of equal interest, but we are bound to admit, that many of them were both instructive and exciting. They would, however, have been more interesting, had a greater number of members participated in the debate.

To report on a meeting of 70 Doctors, without speaking of harmony, would be a great omission. At one time, the modest and orderly maid seemed in danger of being trampled under foot; but all hearts came to her rescue, and the last two days of the Convention presented as much courtesy and kindness of feeling, as we ever witnessed, in any assembly, even of our *clerical* brethren. It was the serenity and brightness which follow the *clearing up* shower, in whose *falling drops* the bow of better promise was painted in brilliant hues.

With unanimity, and much *good taste*, the Convention adjourned to meet at Lancaster next year, in *strawberry time*.

D.

WESTERN PERIODICALS.

There are now the following medical periodicals in the West:

1. Our own *Western Journal of Medicine and Surgery*, a continuation of the Western Journal of the Medical and Physical Sciences, begun in Cincinnati in the year 1827, and of the Louisville Journal of Medicine and Surgery, begun in 1838—united.

2. The *Western and Southern Medical Recorder*, begun in Lexington, November 1841—not a continuation of the former Transylvania Journal.

3. The *Western Lancet*, begun in Cincinnati, May 1842.

These three journals are published in monthly numbers, the first comprising 80 pages, the second and third each 48, making an aggregate for the year of 2112 pages!

If the West and South should sustain this number of journals, it will speak well for the inquisitiveness and liberality of their physicians. If all who ought to subscribe for and read periodical works

should do so, there would be ample support for the whole of these; for the physicians of the valley of the Mississippi amount to thousands. We have heard the multiplication of journals condemned; but who can prevent it, when and where all have an equal right to engage in the enterprise? As well might we attempt to limit the number of newspapers, steamboats, or medical schools. Wherever we have states united into a nation, there are some enterprises that will be multiplied into high competition; which competition, and it only, will apply the corrective. A journal which cannot support itself will not live very long. Like the Irishman's horse, it will eat up its own head; and whatever loses its head, must die. We know not how many carry fodder to our cotemporaries, but the amount contributed to our supply, although not quite sufficient to boast over, or to satiate a bulimious appetite, is enough for good health; and, while we have none to spare, we shall not quarrel with our neighbors, should they even diminish the quantity. If we do not hypocritically hail their appearance in the common field, we shall practise still greater reserve in attempts to drive them from it. We do not feel bound to praise, but we do feel bound not to dispraise their undertakings. These journals are in the interest of the three medical schools in the West; and may be expected, respectively, to advance those interests by every means consistent with *truth* and a *generous* rivalship. *Such* an emulation will do much good and no harm; and we are quite convinced that no other will be cherished. D.

MEDICAL SCHOOLS OF THE WEST.

Next winter, there will be seven Medical schools in operation in the Valley of the Mississippi and the Lakes. They belong to four States, as follows: In Kentucky—the Medical Department of Transylvania University, and Medical Institute of Louisville; in Ohio, the Medical College of Ohio, and Willoughby University of Lake Erie; in Missouri, the Medical Department of Kemper College and the Medical Department of the University of St. Louis; in New Orleans, the Medical College of Louisiana.

In the Union there are 25 schools, or one for every 682,746 inhabitants; the population of the "Old Thirteen," including Florida, is 10,685,594, and its schools 18 in number; it has, then, one for every

593,644; the new States contain 6,376,972, which divided by seven, gives one school for every 910,996. It is obvious, then, that while seven sounds large for the Valley of the Mississippi and the Lakes, it is decidedly less than eighteen for the old States. To reject fractions we may say, that while the new have one medical institution for every 910 thousand inhabitants, the old States have one for every 593 thousand. Eleven schools in the Valley would not, then, be as large a proportion as now exists in the Atlantic basin. We must confess, that this result has rather taken us by surprise, for we had, to some extent, fallen into the common opinion, that the number of western schools is excessive. And excessive it may be, considered in reference to sound policy, but it is far from being so, compared with the number in the mother States; and as they are nearly stationary, while the daughters are rapidly increasing in population, if retrenchment is to be made any where, it should be among them. We are not prepared, however, to propose retrenchment even there, not being convinced, that the number of schools is too great for the Union, but rather that the number of *their* pupils is too few. *Nota bene* that we have underscored "their," for the entire number of students in the United States is *not* too great. It is only, that too few of them attend lectures. If all who engage in the study of medicine were compelled to graduate, our 25 schools would be filled, for there are at all times even more than 5000 engaged in the study; but instead of that number, not more than 2500 seek the benefits of university instruction. Let the other 1500 come forward to qualify themselves in a proper manner, and our schools will average 200 each—as large a number as they ought to contain. D.

DEATH OF DR. BLYTHE.

Died at South Hanover, Indiana, on the 20th inst. (May), James Blythe, D. D., first professor of Chemistry in the Medical Department of Transylvania University.

Dr. Blythe was a native of North Carolina, whence he emigrated to the State of Kentucky, in early life, leaving it about 10 years ago to accept the presidency of South Hanover College, still keeping himself in sight of the green hills of the State with which he had been so long identified. At the time of his death he was about 76 years of age; and had resigned the presidency several years before.

At an early period of life, almost in youth, Dr. Blythe was ordained as a minister of the Presbyterian church, and continued in that capacity till his death. Many years since he was appointed a professor in the Academical Department of the Transylvania University, in the establishment of which, indeed, he bore a conspicuous and important part. He afterwards resigned, and opened an academy for young ladies in Lexington, still, however, continuing an exemplary and solemn minister of the gospel.

In the year 1816, when the Trustees of Transylvania, under the special guidance of Dr. Dudley and Dr. Richardson, undertook the pioneer enterprise of establishing a Medical school in the West, Dr. Blythe was offered and accepted the chair of Chemistry. The faculty was organized in the autumn of 1817, when, from being one of its members, our acquaintance with the deceased commenced. The class of that, the first medical session ever held in the valley of the Mississippi, consisted of 20 pupils, and in the following March, 1818, a public commencement was held, and the degree of Doctor of Medicine conferred on one candidate. Thus Dr. Blythe's name is subscribed to the first diploma ever granted in the West, a *document* which our brethren of Transylvania should, if possible, have deposited in the archives of their *ancient*, and still prosperous university. The graduate was Dr. Lawson, a native of Lexington. After this commencement, we dissolved our connexion with the department, and, in the following summer, Dr. Blythe also resigned.— In the winter of 1818–19 no session was held, but in the ensuing autumn, two new professors (Drs. Brown and Caldwell) were elected and Dr. Blythe was reinstated. The school then reopened, and in 1823 we were elected a second time, and continued in it through four sessions, during which period we became intimately acquainted with the deceased, for whom we cherished a high personal respect. In 1831, 15 years after his original appointment, he took a final leave of the department, and was succeded by Dr. Yandell of Tennessee; public opinion seeming to require that the professor of Chemistry should be a medical man.

The members of the first faculty, appointed in 1816, were Drs. Dudley, Richardson, Overton, Blythe, and Drake, of whom all are still living except Dr. Blythe. Of the faculty of 1819, Dr. Brown died several years since. At a later period Dr. Eberle died, but as he entered the school in bad health and lectured but a few weeks, he should

scarcely be ranked with its professors; so that we may say that from its foundation a quarter of a century ago, but two of its professors have died. Within that period, the University of Pennsylvania has lost five, and the Medical College of Ohio four, including Dr. Eberle.

Dr. Blythe was not a working chemist and of course had no great skill as a manipulator; but he was a classical scholar and adequately acquainted with the general principles of the science, which he presented to his class in a perspicuous manner. In his moral and social character he was honest, upright, and dignified; proud but not arrogant, firm yet not obstinate—abounding in self respect, but at all times disposed to respect the rights and feelings of others. The largest class which Transylvania ever had, listened to his lectures; and the most flourishing sessions of South Hanover College were under his administration.

But a few weeks before his death, we paid him a visit, and found that from several *slight* attacks of cerebral (apoplectic?) disease, his memory had become somewhat impaired; though he was still able to speak with zest of the early days of our *alma mater*. In former times rather corpulent, we now found him reduced in flesh; and on the whole presenting in both mind and body, a degree of senility disproportionate to his years. Of the immediate circumstances of his death we are ignorant.

Thus has passed away one of the first pioneers of medical education in the valley of the Mississippi. Although 50 years of age when he entered on his duties, he lived to see six other schools organized in that valley, with an aggregate of 750 pupils; a progress which has probably not been surpassed in any other country.

D.

ERRATUM.

In page 363 of the last number, 12th line from the top, in the article on Dr. Bigelow's *Florula Lancastriensis*, after "400" read "genera of."

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